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**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.; Kordzi, Joe; Schoellkopf, Lynde  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 5/21/2015 6:18:13 PM  
**Subject:** TX/OK RH Comments

Conference Line: Ex. 6 - Personal Privacy  
Code Ex. 6 - Personal Privacy

Tentative Agenda:  
Comment Categorization  
Comment Summaries  
Other

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Hanks, Katie P.; Collins, JoLynn  
**BCC:** Donaldson, Guy  
**Sent:** 5/15/2015 11:22:38 AM  
**Subject:** RE: hours spent to date on WA 4-09

Thank you Kathy.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, May 15, 2015 9:32 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.; Collins, JoLynn  
**Subject:** RE: hours spent to date on WA 4-09

Thanks Ellen! We'll reserve a few hours for revising cost estimate, etc. under Task 1 and allow Task 4 to use up the rest.

Katie, I'll give you an update shortly on what you have to work with!

Thanks, Kathy

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, May 14, 2015 3:35 PM  
**To:** Heller, Katherine B.  
**Cc:** Hanks, Katie P.; Collins, JoLynn  
**Subject:** RE: hours spent to date on WA 4-09

Hi Kathy,  
Thank you for providing this information about hours for the project.

Please reallocate hours from Tasks 1, 2, and 3 to Task 4 so that you are able to continue work on Task 4 without interruption.

Now that the comment period has closed and we have a better sense of the comments received and what is needed in terms of support for response to comments, we are working to provide additional hours for this work assignment.

We continue to appreciate your work on this project, and will keep you updated.

Thank you very much.  
Sincerely,  
Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, May 12, 2015 10:40 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.

**Subject:** hours spent to date on WA 4-09

Hi, Ellen-

I have reviewed the hours spent to date, and here's where we stand:

**Ex. 4 - CBI**

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Hanks, Katie P.; Collins, JoLynn  
**Sent:** 5/14/2015 3:35:00 PM  
**Subject:** RE: hours spent to date on WA 4-09

Hi Kathy,  
Thank you for providing this information about hours for the project.

Please reallocate hours from Tasks 1, 2, and 3 to Task 4 so that you are able to continue work on Task 4 without interruption.

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Sincerely,  
Ellen

*Ellen H. Belk*  
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**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, May 12, 2015 10:40 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** hours spent to date on WA 4-09

Hi, Ellen-  
I have reviewed the hours spent to date, and here's where we stand:

**Ex. 4 - CBI**

Let me know if you have questions!

Best, Kathy

**Ex. 4 - CBI**



# Ex. 4 - CBI

**Katherine Heller**

Senior Economist

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P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Hanks, Katie P.  
**Sent:** 5/12/2015 9:41:54 PM  
**Subject:** RE: hours spent to date on WA 4-09

Kathy,  
Thank you very much.  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, May 12, 2015 10:40 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** hours spent to date on WA 4-09

Hi, Ellen-

**Ex. 4 - CBI**

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.; Kordzi, Joe; Jolynn Collins; Schoellkopf, Lynde  
**BCC:** R6-ConfRm-PecanTree-06111@epa.gov  
**Sent:** 5/11/2015 11:26:05 AM  
**Subject:** TX RH RTI Comment Categorization

Is it possible to move this earlier by a half hour? If so, thanks everyone!

Call in number: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

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**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.; Kordzi, Joe; Jolynn Collins; Schoellkopf, Lynde  
**BCC:** R6-ConfRm-PecanTree-06111@epa.gov  
**Sent:** 5/6/2015 3:13:56 PM  
**Subject:** TX RH RTI Comment Categorization

Call in number: [Ex. 6 - Personal Privacy]  
Code: [Ex. 6 - Personal Privacy]

---

**From:** Belk, Ellen  
**To:** Hanks, Katie P.; Heller, Katherine B.  
**CC:** Kordzi, Joe  
**Sent:** 5/6/2015 3:09:56 PM  
**Subject:** RE: Comment Categorization

We have had a request from our attorneys for a change as far as comment summaries. Would you please plan to summarize the legal comments, including legal subcategories, as well as the other categories which were in bold on your list?

Thanks very much.

Ellen H. Belk  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Hanks, Katie P. [mailto:kphanks@rti.org]  
**Sent:** Tuesday, May 05, 2015 1:18 PM  
**To:** Belk, Ellen; Heller, Katherine B.  
**Cc:** Kordzi, Joe  
**Subject:** RE: Comment Categorization

We are underway with the RH comments. For consistency, we have one person (Katie) reading and marking comments with categories and another person doing the excerpting/pasting. We may add another person pasting but wanted to get the hang of it first to be sure we're working efficiently. We are **Ex. 4 - CBI** into this, some of which of comment reading/categorizing time and other is pasting time.

# Ex. 5 - Deliberative

We need to download a few more comments as they are posted in the docket. Our goal is to first produce a complete RTC document, and then to focus on summarizing/compressing with any leftover hours we have. The complete document (everything in, but unsummarized) should be ready in a couple of weeks. Things should speed up once **Ex. 5 - Deliberative** is done.

Please let me know if you have any questions or thoughts on the unformatted work in progress document. I expect

well have made much more progress by the time we talk on May 12.

Katie Hanks  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
(919) 316-3732  
(919) 541-7155 (fax)

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Tuesday, May 05, 2015 11:59 AM  
**To:** Heller, Katherine B.; Hanks, Katie P.  
**Cc:** Kordzi, Joe  
**Subject:** Comment Categorization

How is the categorization going? Do you still think a brief call next week is what's likely to be needed, or would a discussion prior to that be helpful?

My managers have asked where there is any information available about the project schedule. They are curious to know if you have an estimate about approximately when the comments that are being categorized will be available. I assume the comments that are not being summarized will be available first.

Thanks!

Ellen H. Belk  
Environmental Engineer  
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Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Hanks, Katie P.; Heller, Katherine B.  
**CC:** Kordzi, Joe  
**Sent:** 5/5/2015 2:56:55 PM  
**Subject:** RE: Comment Categorization

Thanks very much. Looks like good progress so far.

We look forward to talking with you on the 12<sup>th</sup>.

**From:** Hanks, Katie P. [mailto:kphanks@rti.org]  
**Sent:** Tuesday, May 05, 2015 1:18 PM  
**To:** Belk, Ellen; Heller, Katherine B.  
**Cc:** Kordzi, Joe  
**Subject:** RE: Comment Categorization

We are underway with the RH comments. For consistency, we have one person (Katie) reading and marking comments with categories and another person doing the excerpting/pasting. We may add another person pasting but wanted to get the hang of it first to be sure we're working efficiently. We are **Ex. 4 - CBI** into this, some of which of comment reading/categorizing time and other is pasting time.

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Please let me know if you have any questions or thoughts on the unformatted work in progress document. I expect well have made much more progress by the time we talk on May 12.

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(919) 541-7155 (fax)

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, May 05, 2015 11:59 AM



**To:** Heller, Katherine B.; Hanks, Katie P.

**Cc:** Kordzi, Joe

**Subject:** Comment Categorization

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Thanks!

*Ellen H. Belk*

Environmental Engineer

U.S. EPA Region 6

Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.  
**CC:** Kordzi, Joe  
**Sent:** 5/5/2015 11:59:20 AM  
**Subject:** Comment Categorization

How is the categorization going? Do you still think a brief call next week is what's likely to be needed, or would a discussion prior to that be helpful?

My managers have asked where there is any information available about the project schedule. They are curious to know if you have an estimate about approximately when the comments that are being categorized will be available. I assume the comments that are not being summarized will be available first.

Thanks!

*Ellen H. Belk*

Environmental Engineer

U.S. EPA Region 6

Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Collins, JoLynn  
**Sent:** 4/29/2015 10:46:35 AM  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Thanks. I'll let Joe know too.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, April 29, 2015 9:38 AM  
**To:** Belk, Ellen  
**Cc:** Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

That sounds good to me. I'll let Katie know that for technical questions, she can contact Joe directly and just cc you and me. Thanks!

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, April 29, 2015 10:37 AM  
**To:** Heller, Katherine B.  
**Cc:** Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Hi Kathy,  
I consider yesterday's meeting to have been the official start to RTI's support with respect to comment categorization. At this time, I am comfortable letting Katie and Joe coordinate directly as needed on technical issues.

For project related communication going forward, I propose that you and I be cc'd on email communication between Joe and Katie, and that we no longer include JoLynn Collins. We will of course continue to include JoLynn on any communication that is contract related.

Is that acceptable to you?  
Ellen

Ellen H. Belk  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Hanks, Katie P. [mailto:kphanks@rti.org]  
**Sent:** Wednesday, April 29, 2015 8:59 AM  
**To:** Heller, Katherine B.; Belk, Ellen  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

This is very helpful.

## Ex. 5 - Deliberative

Also, just to confirm, it looks like the

Ex. 5 - Deliberative

**Ex. 5 - Deliberative**

these.

Please let us know if you prefer something more abbreviated for

Katie Hanks  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
(919) 316-3732  
(919) 541-7155 (fax)

**From:** Heller, Katherine B.  
**Sent:** Wednesday, April 29, 2015 9:16 AM  
**To:** Belk, Ellen; Hanks, Katie P.  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Ellen,  
Thanks very much for the **Ex. 5 - Deliberative** and this very detailed direction for our comment support. We'll get started and be in touch if we have any questions or concerns.

Best,  
Kathy

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Tuesday, April 28, 2015 4:43 PM  
**To:** Heller, Katherine B.; Hanks, Katie P.  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** TX-OK Comment Categorization -- mtg followup

Thank you very much for discussion earlier today.

For comment categorization, we have the following priorities/preferences/requests:

# Ex. 5 - Deliberative

# Ex. 5 - Deliberative

## Ex. 5 - Deliberative

We look forward to talking with you further in two weeks, and have set up a meeting for May 12<sup>th</sup> at 9:30 am.

If you have questions or if there is additional information that would be helpful please let us know.

I will send background materials in a separate email message.

Ellen H. Belk  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Collins, JoLynn  
**Sent:** 4/29/2015 10:36:48 AM  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Hi Kathy,

I consider yesterday's meeting to have been the official start to RTI's support with respect to comment categorization. At this time, I am comfortable letting Katie and Joe coordinate directly as needed on technical issues.

For project related communication going forward, I propose that you and I be cc'd on email communication between Joe and Katie, and that we no longer include JoLynn Collins. We will of course continue to include JoLynn on any communication that is contract related.

Is that acceptable to you?

Ellen

*Ellen H. Belk*

Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Hanks, Katie P. [mailto:kphanks@rti.org]  
**Sent:** Wednesday, April 29, 2015 8:59 AM  
**To:** Heller, Katherine B.; Belk, Ellen  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

This is very helpful.

# Ex. 5 - Deliberative

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(919) 541-7155 (fax)

**From:** Heller, Katherine B.  
**Sent:** Wednesday, April 29, 2015 9:16 AM  
**To:** Belk, Ellen; Hanks, Katie P.  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Ellen,

Thanks very much for the **Ex. 5 - Deliberative** and this very detailed direction for our comment support. We'll get

started and be in touch if we have any questions or concerns.

Best,  
Kathy

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Tuesday, April 28, 2015 4:43 PM  
**To:** Heller, Katherine B.; Hanks, Katie P.  
**Cc:** Kordzi, Joe; Collins, JoLynn  
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Environmental Engineer

U.S. EPA Region 6

Air Program, Planning

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---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.  
**CC:** Kordzi, Joe; Jolynn Collins  
**Sent:** 4/28/2015 5:02:28 PM  
**Subject:** FW: Emailing: SMU\_regional\_haze\_presentation\_11\_28\_06.ppt  
**Attachments:** SMU\_regional\_haze\_presentation\_11\_28\_06.ppt

As a follow-up to our meeting earlier today, Joe has provided some background materials on regional haze. Please see his message below.

-----Original Message-----

From: Kordzi, Joe  
Sent: Tuesday, April 28, 2015 3:17 PM  
To: Belk, Ellen  
Subject: Emailing: SMU\_regional\_haze\_presentation\_11\_28\_06.ppt

Ellen,

1. Attached is one of my old presentations on RH.

2. Pls direct RTI to this page for general information on the RH program: <http://www.epa.gov/airquality/visibility/index.html>

From the above you can select "Regulatory Actions" on the sidebar and pull up the 1999 final RH rule:

<http://www.epa.gov/airquality/visibility/pdfs/20120530finalrule.pdf>

and the final BART rule:

<http://www.gpo.gov/fdsys/pkg/FR-2005-07-06/pdf/05-12526.pdf>

## Ex. 5 - Deliberative

3. RTI should see our proposal which can be found in the docket.

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Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.  
**CC:** Kordzi, Joe; Jolynn Collins  
**Sent:** 4/28/2015 4:43:17 PM  
**Subject:** TX-OK Comment Categorization -- mtg followup

Thank you very much for discussion earlier today.

For comment categorization, we have the following priorities/preferences/requests:

# Ex. 5 - Deliberative

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I will send background materials in a separate email message.

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Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Kordzi, Joe; Collins, JoLynn; Katherine B. Heller (kbh@rti.org); Hanks, Katie P.  
**Sent:** 4/28/2015 10:47:05 AM  
**Subject:** **Ex. 5 - Deliberative**  
**Attachments:**

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Kordzi, Joe; Collins, JoLynn; Katherine B. Heller (kbh@rti.org); Hanks, Katie P.  
**Sent:** 4/28/2015 10:37:25 AM  
**Subject:**  
**Attachments:**

**Ex. 5 - Deliberative**

*Ellen H. Belk*

Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe; Collins, JoLynn  
**CC:** Hanks, Katie P.  
**Sent:** 4/27/2015 2:55:54 PM  
**Subject:** TX RH Contractor Support - Comments

Conference Line: [REDACTED]

Code [REDACTED]

Agenda:

RTI support for response to comments

Overview of comments received

Comment categories - draft

Comment summaries

*Ellen H. Belk*

Environmental Engineer

U.S. EPA Region 6

Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe  
**CC:** Hanks, Katie P.  
**Sent:** 4/27/2015 2:54:43 PM  
**Subject:**

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

Agenda:

RTI support for response to comments  
Overview of comments received  
Comment categories - draft  
Comment summaries

*Ellen H. Belk*

Environmental Engineer  
U.S. EPA Region 6  
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[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 4/27/2015 2:28:08 PM  
**Subject:** RE: checking in

Hi Kathy,  
I would like to set up a time for us to talk briefly tomorrow, including Katie and Joe. Times that are good for us are 9:30 am and 1 pm. Do either of those work for you? Or when is good for you?  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, April 24, 2015 10:06 AM  
**To:** Belk, Ellen  
**Subject:** RE: checking in

Hi, Ellen-  
Thanks for responding so quickly! We're in no rush if you are not, but wanted to make sure we weren't missing anything.

I'll be monitoring email but will be out of the office this afternoon. If you want to talk it looks as though Katie is in the office today, or we could chat on Monday.  
Thanks,

Kathy

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, April 23, 2015 4:15 PM  
**To:** Heller, Katherine B.  
**Cc:** Hanks, Katie P.  
**Subject:** RE: checking in

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I have received your message and plan to get back to you tomorrow, likely in the afternoon.  
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**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** checking in

Hi, Ellen-  
Katie and I wanted to touch base now that the comment period had ended. I believe we are awaiting an outline and specific TD from you, but we wanted to make certain that we shouldn't be moving forward on the comments at this time.

Thanks,

**Katherine Heller**  
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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 4/24/2015 3:33:21 PM  
**Subject:** RE: checking in

Hi Kathy,  
I am still awaiting additional information. I'll be in touch again on Monday afternoon.  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, April 24, 2015 10:06 AM  
**To:** Belk, Ellen  
**Subject:** RE: checking in

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**Sent:** Thursday, April 23, 2015 4:15 PM  
**To:** Heller, Katherine B.  
**Cc:** Hanks, Katie P.  
**Subject:** RE: checking in

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**Cc:** Hanks, Katie P.  
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**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Hanks, Katie P.  
**Sent:** 4/23/2015 4:15:24 PM  
**Subject:** RE: checking in

Hi Kathy,  
I have received your message and plan to get back to you tomorrow, likely in the afternoon.  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, April 23, 2015 1:18 PM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** checking in

Hi, Ellen-  
Katie and I wanted to touch base now that the comment period had ended. I believe we are awaiting an outline and specific TD from you, but we wanted to make certain that we shouldn't be moving forward on the comments at this time.

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Depro, Brooks M.; Jolynn Collins  
**Sent:** 4/8/2015 3:41:18 PM  
**Subject:** RE: plans for cost estimate

Hi Kathy,  
Yes, sounds good.  
Thank you.  
Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Heller, Katherine B. [mailto:[kbh@rti.org](mailto:kbh@rti.org)]  
**Sent:** Wednesday, April 08, 2015 11:11 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** plans for cost estimate

Hi, Ellen-  
We are working on the cost estimate for WA 4-09. I know we don't know yet what all the comments may be, but I thought I would establish a subcontract with Environ and a consulting agreement with Dr Fox under this WA for a nominal number of hours Ex. 4 - CBI but make any work under them contingent on TD. Having all the paperwork in place would facilitate a quicker response from them if needed, although we might have to modify the cost estimate if more work were needed than the small number of hours included in the initial cost estimate.

Does that approach make sense to you?

Thanks,

**Katherine Heller**  
Senior Economist  
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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Collins, JoLynn; Katherine B. Heller (kbh@rti.org)  
**CC:** Kordzi, Joe; Hanks, Katie P.  
**BCC:** R6-ConfRm-South-10O15/R6---10th-Floor  
**Sent:** 4/2/2015 2:48:54 PM  
**Subject:** TX RH Evaluation - RTI support for response to comments (discussion with RTI)

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

Agenda:  
Award status  
RTI support for response to comments

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Collins, JoLynn; Katherine B. Heller (kbh@rti.org)  
**CC:** Kordzi, Joe; Hanks, Katie P.  
**Sent:** 4/1/2015 3:53:33 PM  
**Subject:** TX RH Evaluation - RTI support for response to comments (discussion with RTI)

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

Agenda:  
Award status  
RTI support for response to comments

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
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---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**CC:** Kordzi, Joe  
**Sent:** 4/1/2015 3:01:44 PM  
**Subject:** TX RH Evaluation - RTI support for response to comments (discussion with RTI)

Conference Line: [Ex. 6 - Personal Privacy]  
Code [Ex. 6 - Personal Privacy]

Agenda:  
Award status  
RTI support for response to comments

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 3/25/2015 4:28:45 PM  
**Subject:** RE: April 20th and following

Thank you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, March 25, 2015 2:13 PM  
**To:** Belk, Ellen  
**Subject:** RE: April 20th and following

Dr. Fox responded that she should be able to plan her schedule to have availability.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, March 25, 2015 2:44 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: April 20th and following

Great. Thank you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, March 24, 2015 8:30 AM  
**To:** Belk, Ellen  
**Subject:** RE: April 20th and following

Hi, Ellen-  
I will be happy to touch base with Dr. Fox and let you know of her availability during that time.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, March 23, 2015 4:57 PM  
**To:** Heller, Katherine B.  
**Subject:** April 20th and following

Katherine,

As you likely recall, the comment period for the Texas regional haze action closes on April 20<sup>th</sup>. Would you please contact Dr. Fox to inquire about her availability in May and June? Although at this time we do not know exactly what comments will be received, we would appreciate knowing whether or not her schedule would allow for consultation if needed.

Of course, if there were to be any consultation, we would need to have the contract mechanism in place for the next period of performance, and would include RTI in any communication.

Thank you very much.

Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 3/25/2015 2:44:04 PM  
**Subject:** RE: April 20th and following

Great. Thank you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, March 24, 2015 8:30 AM  
**To:** Belk, Ellen  
**Subject:** RE: April 20th and following

Hi, Ellen-  
I will be happy to touch base with Dr. Fox and let you know of her availability during that time.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, March 23, 2015 4:57 PM  
**To:** Heller, Katherine B.  
**Subject:** April 20th and following

Katherine,

As you likely recall, the comment period for the Texas regional haze action closes on April 20<sup>th</sup>. Would you please contact Dr. Fox to inquire about her availability in May and June? Although at this time we do not know exactly what comments will be received, we would appreciate knowing whether or not her schedule would allow for consultation if needed.

Of course, if there were to be any consultation, we would need to have the contract mechanism in place for the next period of performance, and would include RTI in any communication.

Thank you very much.

Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**Sent:** 3/23/2015 4:56:35 PM  
**Subject:** April 20th and following

Katherine,

As you likely recall, the comment period for the Texas regional haze action closes on April 20<sup>th</sup>. Would you please contact Dr. Fox to inquire about her availability in May and June? Although at this time we do not know exactly what comments will be received, we would appreciate knowing whether or not her schedule would allow for consultation if needed.

Of course, if there were to be any consultation, we would need to have the contract mechanism in place for the next period of performance, and would include RTI in any communication.

Thank you very much.

Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Hanks, Katie P.  
**Sent:** 1/26/2015 2:04:17 PM  
**Subject:** TX RH Evaluation - Contractor support for Response to Comments - placeholder in case it works to meet with RTI  
**Attachments:** TX-OK RH Response to Comments v2.docx

Conference Line: [Ex. 6 - Personal Privacy]  
Code: [Ex. 6 - Personal Privacy]

Background:

The Texas / Oklahoma Regional Haze action has been proposed and is currently open for comments. The region has received multiple requests for an extension to the comment period and has agreed to grant an extension of 60 days. A federal register action will be published with the new comment period end date of April 20, 2015.

Agenda for this call:

Recent amendment  
Support for response to comments  
RTI  
Subcontractors / consultants (Environ / Dr. Fox)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/30/2014 12:05:09 PM  
**Subject:** RE: Possible support for response to comments

Sure, I did take notes, but always good to have it directly.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, December 30, 2014 11:04 AM  
**To:** Belk, Ellen  
**Subject:** RE: Possible support for response to comments

That makes sense. Would it be helpful for Katie to send her list of assumptions about comments, or did you capture all that during the call?

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, December 30, 2014 12:03 PM  
**To:** Heller, Katherine B.  
**Subject:** Possible support for response to comments

Hi Katherine and Katie,  
Thank you for the information.  
Before I set up a future call, let's wait until we have had the hearings, and until I have had a chance to talk further with the team  
Thanks again for the call today.  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**Sent:** 12/30/2014 12:02:58 PM  
**Subject:** Possible support for response to comments

Hi Katherine and Katie,

Thank you for the information.

Before I set up a future call, let's wait until we have had the hearings, and until I have had a chance to talk further with the team

Thanks again for the call today.

Ellen

*Ellen Belk*

U.S. EPA Region 6

Air Program, Planning

214-665-2164

belk.ellen@epa.gov

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 12/29/2014 10:28:24 AM  
**Subject:** Texas regional haze contracting

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy



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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/29/2014 8:24:45 AM  
**Subject:** RE: available for a short call today?

Hi Katherine,

I was out unexpectedly last week with an illness, but am better and back at work.

Anytime except between 11 – 1 pm central time would work today, tomorrow, Wed or Fri.

Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 22, 2014 10:55 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** available for a short call today?

Hi, Ellen-

I hope you are well. Katie and I wondered if you would be available for a short call at 11 your time. I will be in the office until about 1 pm your time; Katie will be available throughout the afternoon, and no need to wait until I am available. So if 11 does not work for you, please suggest a convenient time. I don't think the call will take more than 30 minutes.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**Sent:** 12/16/2014 11:23:59 AM  
**Subject:** FW: info about the rule?

Hi Katherine,

Although we do not have the published version yet, there is a pre-publication version on the Region 6 website:

<http://www.epa.gov/region6/newsevents/index.html>

---

EPA announces proposed action to reduce harmful emissions of sulfur dioxide and improve visibility in Texas and Oklahoma. The U.S. Environmental Protection Agency (EPA) announced a proposed action to reduce harmful emissions of sulfur dioxide (SO<sub>2</sub>) to improve visibility at some of Texas' and Oklahoma's most treasured parks and wilderness areas. After a thorough review, EPA has proposed to partially approve and partially disapprove the state of Texas' regional haze plan intended to meet federal Clean Air Act requirements for improving visibility and reducing haze in the nation's national parks and wilderness areas. After being published in the Federal Register, the proposed plan will be open to a 60-day public comment period. EPA will also hold a public hearing in Austin on January 13, 2015, and one in Oklahoma City on January 15, 2013. Oklahoma will also benefit from this action to control pollution from Texas facilities and will achieve visibility improvements faster than the Oklahoma Department of Environmental Quality (ODEQ) proposed in their rate of progress plan for visibility improvements for reducing regional haze impacts in the Wichita Mountains. There are no Oklahoma facilities affected by this action.

- A pre-publication version of the Federal Register Notice is available and will be published in the Federal Register in 7 to 10 days. (268 pp, 1.8 MB, [About PDF](#))

*Ellen Belk*

U.S. EPA Region 6  
 Air Program, Planning  
 214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

POSITIONS OR VIEWS EXPRESSED DO NOT REPRESENT OFFICIAL EPA POLICY

**From:** Belk, Ellen  
**Sent:** Tuesday, December 16, 2014 10:18 AM  
**To:** 'Heller, Katherine B.'  
**Subject:** RE: info about the rule?

Hi Katherine,  
 The proposed rule is scheduled to be in the Federal Register today.  
 I will forward a copy to you as soon as I receive it.  
 Thanks,  
 Ellen

*Ellen Belk*

U.S. EPA Region 6  
 Air Program, Planning  
 214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

POSITIONS OR VIEWS EXPRESSED DO NOT REPRESENT OFFICIAL EPA POLICY

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Monday, December 15, 2014 10:14 AM

**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** info about the rule?

Hi, Ellen,

In preparation for our conversation on Wednesday, Katie asked if I had any technical information about the rule that she could review, or a FR notice. Is there something you could send for her to review? Has it been published in FR?

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/16/2014 11:17:58 AM  
**Subject:** RE: info about the rule?

Hi Katherine,  
The proposed rule is scheduled to be in the Federal Register today.  
I will forward a copy to you as soon as I receive it.  
Thanks,  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

POSITIONS OR VIEWS EXPRESSED DO NOT REPRESENT OFFICIAL EPA POLICY

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 15, 2014 10:14 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** info about the rule?

Hi, Ellen,  
In preparation for our conversation on Wednesday, Katie asked if I had any technical information about the rule that she could review, or a FR notice. Is there something you could send for her to review? Has it been published in FR?

Thanks,

**Katherine Heller**  
Senior Economist  
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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/11/2014 10:53:07 AM  
**Subject:** RE: Response to Comments -- contract support

Thanks. If you send me Katie's email I can add her to the invite.

-----Original Appointment-----

**From:** Heller, Katherine B. [mailto:kbh@rti.org]

**Sent:** Thursday, December 11, 2014 9:41 AM

**To:** Belk, Ellen

**Subject:** Accepted: Response to Comments -- contract support

**When:** Wednesday, December 17, 2014 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).

**Where:** R6-ConfRm-PineTree-06O15

I will forward this to Katie Hanks, and forward the materials in a separate email. Thanks!

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe; Snyder, Erik; Feldman, Michael; Schoellkopf, Lynde; Donaldson, Guy  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 12/11/2014 10:34:03 AM  
**Subject:** Response to Comments -- contract support

Conference Line: Ex. 6 - Personal Privacy

Code Ex. 6 - Personal Privacy

Agenda

- Introductions
- Overview / Background -- EPA Region 6
- RTI Process for assisting EPA with response to comments -- RTI
- Examples -- RTI

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/1/2014 4:14:41 PM  
**Subject:** RE: still want to discuss response to comments?

Thanks for remembering about this.  
Give me a chance to meet with JoLynn, and then I will get back to you, either way.  
Thanks!

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 01, 2014 3:10 PM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** still want to discuss response to comments?

Hi, Ellen-  
Several weeks ago, you expressed an interest in talking with our engineers about possible support during response to public comments. The person best suited to discuss this with you is Katie Hanks. She is out of the office Tuesday and Wednesday of this week, but has availability Thursday afternoon and some of Friday also. Katie also has quite a few time slots available next week if that fits your schedule better.

If you are still interested in talking about this with us, let us know what times would work for you and your colleagues, and we will find a time that works.

Best regards,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Bullock, David; Depro, Brooks M.; Jolynn Collins  
**Sent:** 10/27/2014 4:07:41 PM  
**Subject:** RE: call to discuss Response to Comments support

Kathy,  
 If possible, we would like to set up a call to discuss Response to Comments support sometime during the first week of December.  
 Thank you,  
 Ellen

*Ellen Belk*

Environmental Engineer  
 U.S. Environmental Protection Agency, Region 6  
 Multi-media Planning and Permitting Division  
 Air Planning Section, 6PD-L  
 1445 Ross Avenue  
 Dallas Texas 75202  
 Tel: 214-665-2164

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, October 23, 2014 10:37 AM  
**To:** Belk, Ellen  
**Cc:** Bullock, David; Depro, Brooks M.  
**Subject:** call to discuss Response to Comments support

Ellen,  
 David Bullock will be your contact person for the discussion of response to comments support. We have some other folks who may also participate in the call: David Reeves and Katie Hanks. Both David Bullock and Katie are actively engaged in overseeing response to comments tasks at present, and David Reeves is their program director.

I quickly checked schedules, and we have several windows available next week and are quite open the first week of November. If you wish to have a call next week, our current windows are (all EDT):

Tuesday 10/28

11-12

1-2

Wednesday 10/29

9-11:30

12-2:30

Thursday 10/30

9 – 11

1-3

Friday 10/31

9-11

Please contact David and cc: me to discuss when you might want to schedule a call.

Thanks very much!

**Katherine Heller**  
 Senior Economist  
 RTI International | Environmental, Technology, and Energy Economics



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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 10/23/2014 1:12:20 PM  
**Subject:** RE: call to discuss Response to Comments support

Thank you!  
I will check with others here, and get back to you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, October 23, 2014 10:37 AM  
**To:** Belk, Ellen  
**Cc:** Bullock, David; Depro, Brooks M.  
**Subject:** call to discuss Response to Comments support

Ellen,  
David Bullock will be your contact person for the discussion of response to comments support. We have some other folks who may also participate in the call: David Reeves and Katie Hanks. Both David Bullock and Katie are actively engaged in overseeing response to comments tasks at present, and David Reeves is their program director.

I quickly checked schedules, and we have several windows available next week and are quite open the first week of November. If you wish to have a call next week, our current windows are (all EDT):

Tuesday 10/28

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1-2

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9-11:30

12-2:30

Thursday 10/30

9 – 11

1-3

Friday 10/31

9-11

Please contact David and cc: me to discuss when you might want to schedule a call.

Thanks very much!

**Katherine Heller**  
Senior Economist  
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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Collins, JoLynn; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 10/23/2014 9:05:23 AM  
**Subject:** Texas Regional Haze Evaluation: WA 3-9

Conference Line: [Ex. 6 - Personal Privacy]

Code [Ex. 6 - Personal Privacy]

Agenda:

- Funds remaining on this work assignment
- Contract support for public comments

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**From:** Belk, Ellen  
**To:** Collins, JoLynn; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 10/23/2014 7:58:59 AM  
**Subject:** Texas Regional Haze Evaluation: WA 3-9

---

**From:** Belk, Ellen  
**To:** Snyder, Erik; Feldman, Michael; Kordzi, Joe; Schoellkopf, Lynde; Collins, JoLynn; 'gyarwood@environcorp.com'; unopmongcol@environcorp.com; Donaldson, Guy; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 10/9/2014 3:20:29 PM  
**Subject:** Texas Regional Haze Evaluation: Modeling Analysis

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

Agenda (may be updated prior to meeting):

Data files

- Received
- Electronic copy needed

Support during response to comments

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 10/9/2014 3:19:32 PM  
**Subject:** RE: any comments or direction on WA 3-09?

Yes please. Thank you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, October 09, 2014 12:20 PM  
**To:** Belk, Ellen  
**Subject:** RE: any comments or direction on WA 3-09?

Ellen,  
Thanks for the heads up. Shall I communicate with Phyllis and the folks at Environ that EPA will likely need some of their time during the Jan to April time frame for support in responding to comments?

We look forward to helping to facilitate their efforts.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, October 09, 2014 1:02 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: any comments or direction on WA 3-09?

Hi Katherine,

For Phyllis, we greatly appreciate her work thus far, and almost certainly will need her help in response to comments.

For Environ, we also are very appreciative of their work. We would like to meet with them in a couple of weeks for discussion. As I think you have seen, I sent a meeting invitation for a conference call the week after next. Going forward, we will almost certainly need Environ's help in response to comments as well.

As I think you know, the date for signature on the proposal is 26, 2014. We expect the comment period to be approximately 60 days following publication, so help with comments is likely to be needed sometime mid to late Jan to early to mid-April or so (most likely Feb and March?). I realize that is a rough timeline and we will have more information as we get closer.

Thanks,  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, October 08, 2014 12:31 PM  
**To:** Belk, Ellen  
**Subject:** any comments or direction on WA 3-09?

Hi, Ellen-

It has been a while since we have heard from you, and I hope things are going well.

We're preparing our monthly progress report for September. Both Ou and Phyllis asked if EPA had any comments or direction based on their deliverables. Ou is waiting to create the hard drive until she is sure that the data and models are final.

Please let us know if you need anything further on either Task 2 or Task 3.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 10/9/2014 1:01:30 PM  
**Subject:** RE: any comments or direction on WA 3-09?

Hi Katherine,

For Phyllis, we greatly appreciate her work thus far, and almost certainly will need her help in response to comments.

For Environ, we also are very appreciative of their work. We would like to meet with them in a couple of weeks for discussion. As I think you have seen, I sent a meeting invitation for a conference call the week after next. Going forward, we will almost certainly need Environ's help in response to comments as well.

As I think you know, the date for signature on the proposal is 26, 2014. We expect the comment period to be approximately 60 days following publication, so help with comments is likely to be needed sometime mid to late Jan to early to mid-April or so (most likely Feb and March?). I realize that is a rough timeline and we will have more information as we get closer.

Thanks,  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, October 08, 2014 12:31 PM  
**To:** Belk, Ellen  
**Subject:** any comments or direction on WA 3-09?

Hi, Ellen-  
It has been a while since we have heard from you, and I hope things are going well.

We're preparing our monthly progress report for September. Both Ou and Phyllis asked if EPA had any comments or direction based on their deliverables. Ou is waiting to create the hard drive until she is sure that the data and models are final.

Please let us know if you need anything further on either Task 2 or Task 3.

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Belk, Ellen  
**To:** Snyder, Erik; Feldman, Michael; Kordzi, Joe; Schoellkopf, Lynde; Collins, JoLynn; 'gyarwood@environcorp.com'; unopmongcol@environcorp.com; Donaldson, Guy; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 10/9/2014 8:04:00 AM  
**Subject:** Texas Regional Haze Evaluation: Modeling Analysis

Conference Line: Ex. 6 - Personal Privacy

Code: Ex. 6 - Personal Privacy

Agenda (may be updated prior to meeting):

Data files

- Received
- Electronic copy needed

Support during response to comments

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 10/8/2014 2:20:07 PM  
**Subject:** RE: any comments or direction on WA 3-09?

Hi Katherine,  
Thank you for your message.  
I am checking with the team and will get back to you.  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, October 08, 2014 12:31 PM  
**To:** Belk, Ellen  
**Subject:** any comments or direction on WA 3-09?

Hi, Ellen-  
It has been a while since we have heard from you, and I hope things are going well.

We're preparing our monthly progress report for September. Both Ou and Phyllis asked if EPA had any comments or direction based on their deliverables. Ou is waiting to create the hard drive until she is sure that the data and models are final.

Please let us know if you need anything further on either Task 2 or Task 3.

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Kordzi, Joe; Phyllis Fox; Collins, JoLynn  
**Sent:** 8/5/2014 12:19:34 PM  
**Subject:** RE: Summary of Discussion 8/4 (non-CBI)

Hi Kathy,  
 You are welcome. Yes it was a good meeting. Missed you. Hopefully you will be able to join us for future discussions.  
 Best regards,  
 Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, August 05, 2014 9:42 AM  
**To:** Belk, Ellen  
**Cc:** Kordzi, Joe; Phyllis Fox; Collins, JoLynn  
**Subject:** RE: Summary of Discussion 8/4 (non-CBI)

Thank you, Ellen! It sounds like it was a very productive meeting; I'll take a look at the things Phyllis sent.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, August 05, 2014 10:11 AM  
**To:** Heller, Katherine B.  
**Cc:** Kordzi, Joe; Phyllis Fox; Collins, JoLynn  
**Subject:** Summary of Discussion 8/4 (non-CBI)

Hi Kathy,

Below please find a summary of the discussion yesterday afternoon between EPA R6 and Dr. Fox.

Meeting Time: August 4, 2014, 2:30 – 3:00 pm Central Time  
 Conference Call

Participants: Dr. Fox, Joe Kordzi, Ellen Belk  
 (Katherine Heller had a conflict and was unable to attend)

Topics Discussed: Scrubber Upgrades & Cost Analysis (non-CBI)

- Dr. Fox presented several ideas for proceeding with a cost analysis for scrubber upgrades
- Joe and Dr. Fox discussed advantages and disadvantages of the various ideas

Action Items

- Dr. Fox will continue with the cost analysis
- Dr. Fox will continue to provide work products via email, cc'ing Katherine on all correspondence

Other Notes

- Dr. Fox will continue to use only non-CBI data

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
 214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**CC:** Kordzi, Joe; Phyllis Fox; Jolynn Collins  
**BCC:** Guy Donaldson  
**Sent:** 8/5/2014 10:11:16 AM  
**Subject:** Summary of Discussion 8/4 (non-CBI)

Hi Kathy,

Below please find a summary of the discussion yesterday afternoon between EPA R6 and Dr. Fox.

Meeting Time: August 4, 2014, 2:30 – 3:00 pm Central Time  
Conference Call

Participants: Dr. Fox, Joe Kordzi, Ellen Belk  
(Katherine Heller had a conflict and was unable to attend)

Topics Discussed: Scrubber Upgrades & Cost Analysis (non-CBI)

- Dr. Fox presented several ideas for proceeding with a cost analysis for scrubber upgrades
- Joe and Dr. Fox discussed advantages and disadvantages of the various ideas

Action Items

- Dr. Fox will continue with the cost analysis
- Dr. Fox will continue to provide work products via email, cc'ing Katherine on all correspondence

Other Notes

- Dr. Fox will continue to use only non-CBI data

Ellen Belk  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 8/4/2014 3:11:38 PM  
**Subject:** RE: TX RH: non-CBI data and analyses

Thank you Kathy.

-----Original Appointment-----

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, August 04, 2014 1:58 PM  
**To:** Belk, Ellen  
**Subject:** Declined: TX RH: non-CBI data and analyses  
**When:** Monday, August 04, 2014 2:30 PM-3:00 PM (UTC-06:00) Central Time (US & Canada).  
**Where:** R6-ConfRm-PineTree-06O15

Ellen,  
I have a conflict during the timeframe of the call. If I get free, I'll call in. Please proceed with the call in my absence, and thank you for including me in the invitation.  
Kathy

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Phyllis Fox; Joe Kordzi  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 8/4/2014 2:56:27 PM  
**Subject:** TX RH: non-CBI data and analyses

**Ex. 6 - Personal Privacy**

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 7/21/2014 4:43:47 PM  
**Subject:** RE: response to your questions

Hi Katherine,  
Thank you.  
Let me know if there is anything needed regarding the portal.  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, July 21, 2014 2:59 PM  
**To:** Belk, Ellen  
**Subject:** response to your questions

Hi, Ellen-

I am perfectly happy with the portal idea; I was going to suggest using our public FTP site, but this is great. I haven't followed through with getting access, but I think it is a great solution.

I also agree that email traffic could just cc me to make sure RTI is in the communications loop with Dr. Fox. And for technical telephone calls, Dr. Fox or EPA can just send me an email reporting that the call will take place or has taken place.

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**CC:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe  
**Sent:** 7/14/2014 1:31:57 PM  
**Subject:** RE: FW: Overnight shipmen to DR. Phyllis Fox, Berkeley, CA UPS ( Saturday delivery )

Great. Glad the system worked.

**From:** Phyllis Fox [mailto:phyllisfox@gmail.com]  
**Sent:** Monday, July 14, 2014 12:14 PM  
**To:** Belk, Ellen  
**Cc:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe  
**Subject:** Re: FW: Overnight shipmen to DR. Phyllis Fox, Berkeley, CA UPS ( Saturday delivery )

Got 'em.

Back in Berkeley and mostly recovered.

On Fri, Jul 11, 2014 at 1:40 PM, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:

Dr. Fox,

The CDs (2) are being sent to you by overnight mail. You should receive the package by tomorrow noon. (The tracking number for your package is provided in the message below.)

Katherine,

The CDs (2) for you are being sent by regular mail. You should receive the package by Tues or Wed next week.

*Ellen Belk*

U.S. EPA R6, Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Sanchez, Cesar  
**Sent:** Friday, July 11, 2014 2:07 PM  
**To:** Belk, Ellen  
**Cc:** Winkfield, Chanda  
**Subject:** Overnight shipmen to DR. Phyllis Fox, Berkeley, CA UPS ( Saturday delivery )

Mrs. Belk,

This is to notify you ,that this envelope will be shipped today via UPS priority overnight ( Saturday delivery ) under following tracking number:

**Ex. 6 - Personal Privacy**

Thanks,

Cesar A.Sanchez-Romero  
 12th Floor Mail, Copy and Supply Center for US Environmental Protection Agency Region 6  
 operated under contract by ASN Corporation  
 1445 Ross Avenue Ste 1200  
 Dallas,Tx 75202  
 tel. 214 665 6588  
 fax.214 665 8596





---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Freeman, Carla S.; Depro, Brooks M.; LeDoux, Erica  
**Sent:** 7/14/2014 11:01:03 AM  
**Subject:** RE: Region 6 CBI Document Control Officer

Thank you Kathy.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, July 14, 2014 9:53 AM  
**To:** Belk, Ellen  
**Cc:** Freeman, Carla S.; Depro, Brooks M.; LeDoux, Erica  
**Subject:** RE: Region 6 CBI Document Control Officer

Ellen,  
Thank you very much, we'll proceed to request WA-specific clearances for RTI staff, and then request one for Dr. Fox when she has obtained contract-level clearance.

Best,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, July 14, 2014 10:51 AM  
**To:** Heller, Katherine B.  
**Cc:** Freeman, Carla S.; Depro, Brooks M.; LeDoux, Erica  
**Subject:** RE: Region 6 CBI Document Control Officer

Hi Katherine,  
Yes, the Document Control Officer is Erica LeDoux.  
Please see Erica's contact information below.  
Thank you,  
Ellen

*Ellen Belk*

Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

Erica G. LeDoux, Environmental Engineer  
U.S. EPA Region 6  
Air Permits Section (6PD-R)  
1445 Ross Ave.  
Dallas, TX 75202  
Office: (214) 665-7265  
Fax: (214) 665-6762  
[ledoux.eric@epa.gov](mailto:ledoux.eric@epa.gov)

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Thursday, July 10, 2014 11:06 AM  
**To:** Belk, Ellen  
**Cc:** Freeman, Carla S.; Depro, Brooks M.  
**Subject:** Region 6 CBI Document Control Officer

Hi, Ellen-

We are preparing a request for WA-specific CBI clearance under WA 3-09. Although you, as WAM, will be the person to approve the request, the request will be sent to your CBI manager or document control officer. Could you provide contact information for that person?

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**CC:** Katherine B. Heller (kbh@rti.org); Joe Kordzi  
**BCC:** Guy Donaldson  
**Sent:** 7/11/2014 4:40:34 PM  
**Subject:** FW: Overnight shipmen to DR. Phyllis Fox, Ex. 6 - Personal Privacy UPS ( Saturday delivery )

Dr. Fox,  
The CDs (2) are being sent to you by overnight mail. You should receive the package by tomorrow noon. (The tracking number for your package is provided in the message below.)

Katherine,  
The CDs (2) for you are being sent by regular mail. You should receive the package by Tues or Wed next week.

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Sanchez, Cesar  
**Sent:** Friday, July 11, 2014 2:07 PM  
**To:** Belk, Ellen  
**Cc:** Winkfield, Chanda  
**Subject:** Overnight shipmen to DR. Phyllis Fox, Berkeley, CA UPS ( Saturday delivery )

Mrs. Belk,  
This is to notify you ,that this envelope will be shipped today via UPS priority overnight ( Saturday delivery ) under following tracking number:

**Ex. 6 - Personal Privacy**

Thanks,

Cesar A.Sanchez-Romero  
12th Floor Mail, Copy and Supply Center for US Environmental Protection Agency Region 6  
operated under contract by ASN Corporation  
1445 Ross Avenue Ste 1200  
Dallas,Tx 75202  
tel. 214 665 6588  
fax.214 665 8596

---

**From:** Belk, Ellen  
**To:** Phyllis Fox; Katherine B. Heller (kbh@rti.org)  
**BCC:** Donaldson, Guy; Joe Kordzi  
**Sent:** 7/10/2014 4:17:27 PM  
**Subject:** Dr. Fox's address?

Dr. Fox,  
What is your address for mailing?  
Thank you,  
Ellen

Katherine – if you know Dr. Fox's address in Ex. 6 - Personal Privacy would you please provide it? Thanks!

**From:** Belk, Ellen  
**Sent:** Wednesday, July 09, 2014 3:45 PM  
**To:** Phyllis Fox  
**Cc:** Katherine B. Heller (kbh@rti.org)  
**Subject:** Transmittal of additional non-CBI information

Dr. Fox,

Joe has some additional information he would like to transmit to you by CD due to its size. It is in 2 CDs. This information was included in the responses we received to our 114 letters and was not claimed as CBI. We would email it but it's too big (> 1 gigabyte). How should we send this to you, and where, and when can it arrive? By overnight carrier?

Katherine,

We will send a copy of the same material to you as well. Please let me know the best address for you.

Thank you very much,  
Ellen

Ellen Belk  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Phyllis Fox  
**Sent:** 7/10/2014 7:53:42 AM  
**Subject:** RE: Transmittal of additional non-CBI information

Thank you Katherine.

Do you have Dr. Fox's address in Berkeley? I think she must be in transit.  
Thanks!

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, July 10, 2014 6:46 AM  
**To:** Belk, Ellen; Phyllis Fox  
**Subject:** RE: Transmittal of additional non-CBI information

Please feel free to just mail mine (or whatever is cheapest).

Mail address:  
Katherine Heller, Bldg O9 489  
RTI International  
P.O. Box 12194  
Research Triangle Park, NC 27709

Street address:  
Katherine Heller, Bldg O9 489  
RTI International  
3040 East Cornwallis Rd  
Research Triangle Park, NC 27709

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, July 09, 2014 4:57 PM  
**To:** Phyllis Fox  
**Cc:** Heller, Katherine B.  
**Subject:** Transmittal of additional non-CBI information

Dr. Fox,

Joe has some additional information he would like to transmit to you by CD due to its size. It is in 2 CDs. This information was included in the responses we received to our 114 letters and was not claimed as CBI. We would email it but it's too big (> 1 gigabyte). How should we send this to you, and where, and when can it arrive? By overnight carrier?

Katherine,

We will send a copy of the same material to you as well. Please let me know the best address for you.

Thank you very much,  
Ellen

*Ellen Belk*  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**CC:** Katherine B. Heller (kbh@rti.org)  
**BCC:** Kordzi, Joe; Donaldson, Guy  
**Sent:** 7/9/2014 4:57:10 PM  
**Subject:** Transmittal of additional non-CBI information

Dr. Fox,

Joe has some additional information he would like to transmit to you by CD due to its size. It is in 2 CDs. This information was included in the responses we received to our 114 letters and was not claimed as CBI. We would email it but it's too big (> 1 gigabyte). How should we send this to you, and where, and when can it arrive? By overnight carrier?

Katherine,

We will send a copy of the same material to you as well. Please let me know the best address for you.

Thank you very much,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**CC:** Katherine B. Heller (kbh@rti.org); Joe Kordzi  
**BCC:** Collins, JoLynn; Donaldson, Guy  
**Sent:** 7/8/2014 4:49:10 PM  
**Subject:** FW: Dr. Fox's proposed tasks  
**Attachments:** Coal vs CEM data v8.xlsx; DSI Cost IPM 5-13 TX Sources.xlsx; San Miguel FGD Upgrade Program.pdf; SDA Cost IPM 5-13 TX Sources.xlsx; Survey for Article.pdf; TX RP and LTS Analyses.docx; Weilert Scrubber Data.xlsx; Wet FGD Cost IPM 5-13 TX Sources.xlsx

Dear Dr. Fox,

Thank you very much for the discussion earlier today.

Please see the information from Joe below. I am happy to set up a call with Joe and Katherine anytime if you need clarification or have questions.

Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
 214-665-2164  
 belk.ellen@epa.gov

**From:** Kordzi, Joe  
**Sent:** Tuesday, July 08, 2014 1:49 PM  
**To:** Belk, Ellen  
**Cc:** Donaldson, Guy  
**Subject:** Dr. Fox's proposed tasks

I would like Dr. Fox to do the following ASAP:

1. Review the document "TX RP and LTS Analyses.docx" and provide any feedback, comments, improvements, etc. on Sections 1-4, inclusive. Section 4 is incomplete – see Task 2.
  - a. Note that the DSI, SDA and Wet FGD IPM files feed into this document and so I've included them. Previously, the DSI and SDA files were provided to Dr. Fox, but are again included as they are works in progress and may have undergone slight edits. I would like Dr. Fox to critique these files. We have updated trona costs from Solvair (Mike Wood) that we expect to have finalized soon that has not been included yet in the DSI spreadsheet.
  - b. Note that the file, "Coal vs CEM datav8.xlsx" also feeds into Section 4 of this document. I would like Dr. Fox to critique this file and how it is incorporated into the "TX RP and LTS Analyses.docx" document.
2. Section 4 is intended to propose costs for upgrading the scrubbers at the facilities in Table 1 that are currently partially scrubbed. At this point, I've only started the analyses. I would like Dr. Fox to add sections that cover the following topics:
  - a. Elimination of Scrubber Bypass
  - b. Optimization of Liquid/Gas Ratio
  - c. Gas-Liquid Contact Improvements
  - d. Improving FGD Chemistry
  - e. Use of Organic Acids to Improve Performance
  - f. Cost of Enhancing Scrubber Performance
    - i. Capital Cost of Enhancing Scrubber Performance
    - ii. Operating Cost of Enhancing Scrubber Performance
  - g. Individual Unit Scrubber Upgrade Analyses



Tasks 2.a. – e, inclusive, should present mainly generalized information with references to publically available sources of information in order to illustrate the options generally available to facilities for upgrading scrubbers. It should serve as a basis for performing the analysis in Task 2.f - g.

Task 2.f. should cover the development of a general strategy for costing scrubber upgrades. There is some literature on this subject, including papers by URS. I can supply them if needed.

As Task 2.g. will apply all of the information preceding it, and all of the CBI information Region 6 has collected, into a unit-by-unit cost analysis for scrubber upgrades. Because Dr. Fox does not yet have access to the CBI information, she should at this point only provide what information she can. This should be added to the information on the individual scrubber upgrades, beginning with what is now section 4.4 for Parish 8. Note, due to the information we received on San Miguel (included), we will likely not pursue any further upgrades for this facility. Also note that the Weilert data referenced in section 4.2 is included.

If Dr. Fox has ideas on variations on the above tasks, I would like to discuss them with her.

Joe Kordzi  
EPA Region 6

*" . . . and miles to go before I sleep."*

*- Robert Frost*



## **San Miguel Electric Cooperative FGD Upgrade Program Update**



**Prepared for:  
San Miguel Electric Cooperative  
6200 FM 3387  
Christine, Texas 78012  
P.O. Box 280  
Jourdanton, Texas 78026**

**Submitted by:  
URS Corporation  
9400 Amberglen Boulevard  
Austin, Texas 78729  
June 30, 2014**



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## **1.0 Introduction**

This report discusses the results of the program that URS undertook with San Miguel beginning in 2009 to study ways to upgrade the SO<sub>2</sub> removal performance of the FGD system and subsequently to implement those changes on all four modules. The first sections summarize the results of URS's engineering study to evaluate options to upgrade the SO<sub>2</sub> removal performance. The last section provides an interim update of the FGD system and how it has performed since the upgrades were implemented.

Prior to initiating this FGD upgrade study, URS reviewed a report provided by San Miguel on the SO<sub>2</sub> upgrade that was completed at the plant in 2006. The result of URS' review indicated that there were additional opportunities to possibly improve the scrubbers to boost removal and/or reduce the reliance on the additive DBA. The study confirmed that initial assessment. The first sections describe the scope of work and costs for two different upgrade alternatives – one a low-cost approach that could be completed in a relatively short period of time and a second, more comprehensive approach that involved more money and time, but which had the potential for greater benefits.

The rest of this report contains the following sections:

- Section 2 – Summary of Upgrade Options Considered;
- Section 3 – Process Analysis;
- Section 4 – Cost Estimate;
- Section 5 – Economic Analysis;
- Section 6 – Project Schedule; and
- Section 7 – Conclusions of the Study phase
- Section 8 - Interim Results of Implementation of Option 1 and 2 Improvements on FGD Performance

## **2.0 Summary of Upgrade Options Evaluated**

The San Miguel FGD system consists of four modules that are typical of the first generation limestone FGD systems designed in the late 1970's and early 1980's. The modules have a venturi section for the first contact zone of flue gas and recycled slurry and an absorber section for the second contact zone where the majority of the SO<sub>2</sub> scrubbing is accomplished. The venturi section was originally intended to remove residual fly ash and some SO<sub>2</sub>, and to saturate the flue gas prior to entering the tray section of the absorber. The absorber utilized two counter-current trays and a flooding spray header to distribute the recycle slurry to the trays. At the time of the study, both zones of the modules have been modified from their original designs – the venturi had been opened up to reduce its pressure drop and the recycle slurry fed to it was



introduced in a down-flow, co-current-with-the-flue-gas manner. The absorber had its spray nozzles modified (wider spray angle).

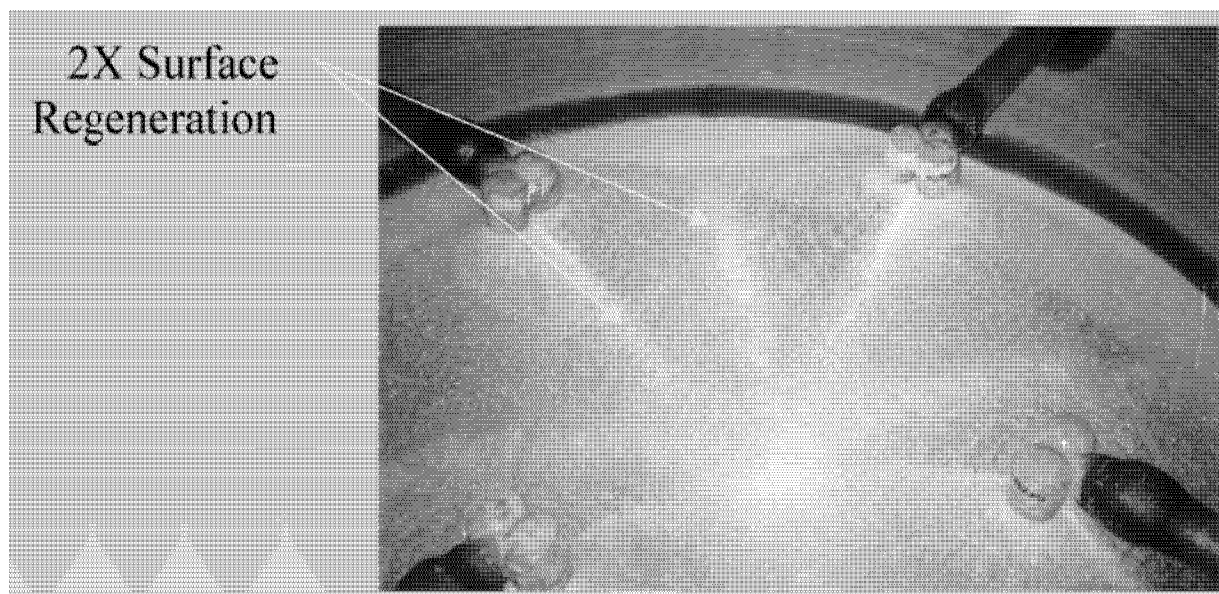
When URS examined the layout of the recycle spray headers, good opportunities for improvement were identified. URS has been redesigning the internals of older FGD systems in the U.S. for many years. More recently URS has been focusing on how to improve gas/liquid contacting so that absorber towers can maximize SO<sub>2</sub> removal – often targeting upper 90 percent SO<sub>2</sub> removal efficiencies for absorbers without having to rely on organic acids like DBA. URS has also been designing and installing trays in some of these same towers, combining the synergy of the upgraded spray headers/nozzles with our new sieve tray designs to achieve high SO<sub>2</sub> removals.

Two basic upgrade options were identified and examined in the study phase of the program:

- Option 1 – Modification of Existing Absorber Spray Section; and
- Option 2 – Option 1 plus Moving Quench Spray to Absorber Section.

Both options included upgrading slurry spray headers to use the Lechler TwinAbsorb® spray nozzles. This nozzle has two outlets that produce intersecting hollow cone sprays, known as double hollow cones (DHC), which improves SO<sub>2</sub> removal as compared with standard spray nozzles. Figure 2-1 shows the intersecting sprays, which break up the drops and regenerate droplet surface area.

Research has shown that most of the SO<sub>2</sub> removal in a spray tower absorber occurs within 18” of the spray nozzle exit. Improved scrubbing results when the spray is turbulent in that zone and the number of droplet-to-droplet collisions are high. Experience has shown that the DHC nozzles provide maximum scrubbing efficiency when designed with a wider spray angle. The two DHC outlets each have 120-degree spray angles, but the two are tilted about 15° apart, which creates an oval pattern overall. URS has installed DHC nozzles in a number of FGD systems and the results have consistently shown an improved ability to scrub SO<sub>2</sub> compared to conventional single cone nozzles.



**Figure 2-1. Spray Pattern from Proposed Double Hollow Cone Spray Nozzles**

The summary of equipment modifications and construction scope of work associated with each of these basic options is presented below. The information presented below is for one absorber (four absorbers have been upgraded):

- Option 1 – Modification of Existing Absorber Spray Section (quantities are per absorber)
  - Remove the 28 existing six-inch spray nozzles
  - Install 28 2205 duplex stainless steel flow splitters or “spiders”, one at each six-inch flange where the existing six-inch spray nozzles are currently located. The spiders are approximately two feet tall and split the flow from each six-inch connection ( $24,000 \text{ gpm} / 28 = 857 \text{ gpm}$ ) so that it feeds three tangential four-inch nozzles at the bottom of the spider.
  - Install three new high-efficiency 4-inch silicon carbide DHC nozzles on each spider. Each DHC nozzle has 286 gpm of flow.
  - Install a spray impingement plate on the walls where the spray from the DHC nozzles hits the walls to protect the rubber lining from erosion.
  - Repair the existing rubber lining after the impingement plates were installed.

Figures 2-2 and 2-3 on the next page show the improvement in spray pattern with the spiders. The 28 original six-inch nozzles provided only 85% coverage of the cross-sectional area of the absorbers at a point 18 inches below the nozzles; the 84 four-inch nozzles on the spiders provide 265% coverage at the same distance. Figure 2-4 is a sketch of an individual spider arrangement.

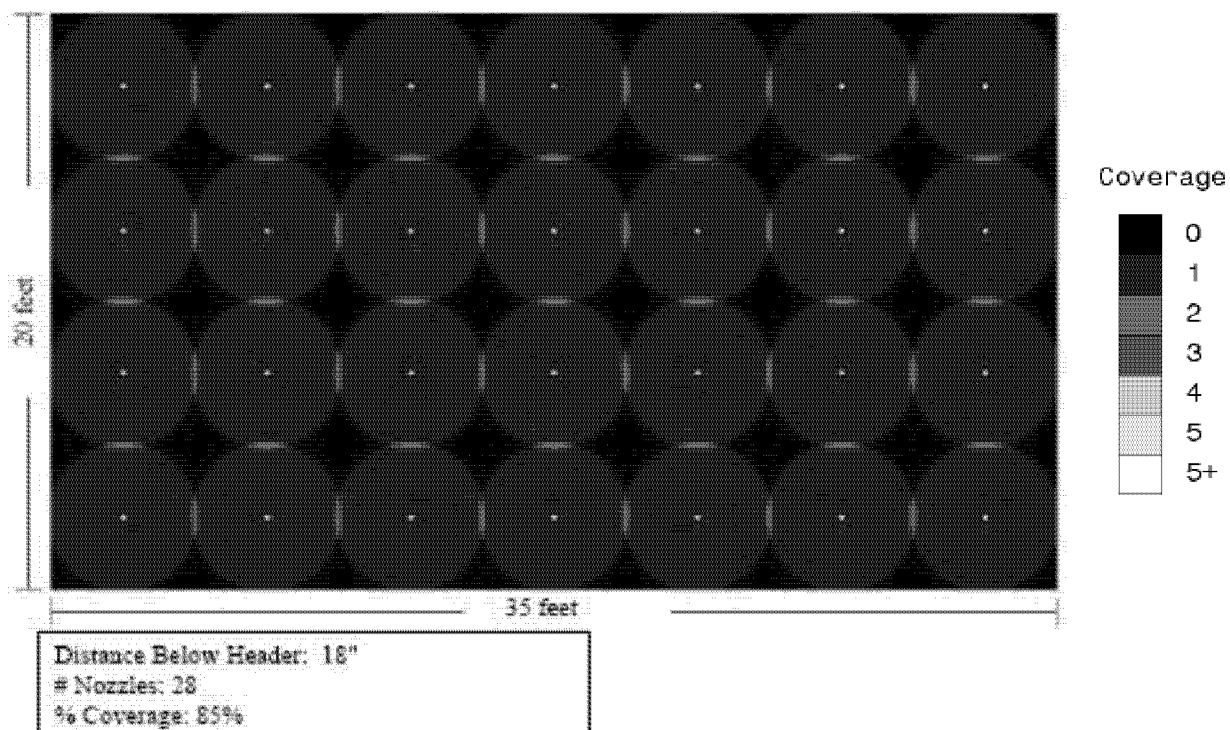


Figure 2-2. Spray Pattern from 28 Existing Six-Inch Nozzles in the Absorbers

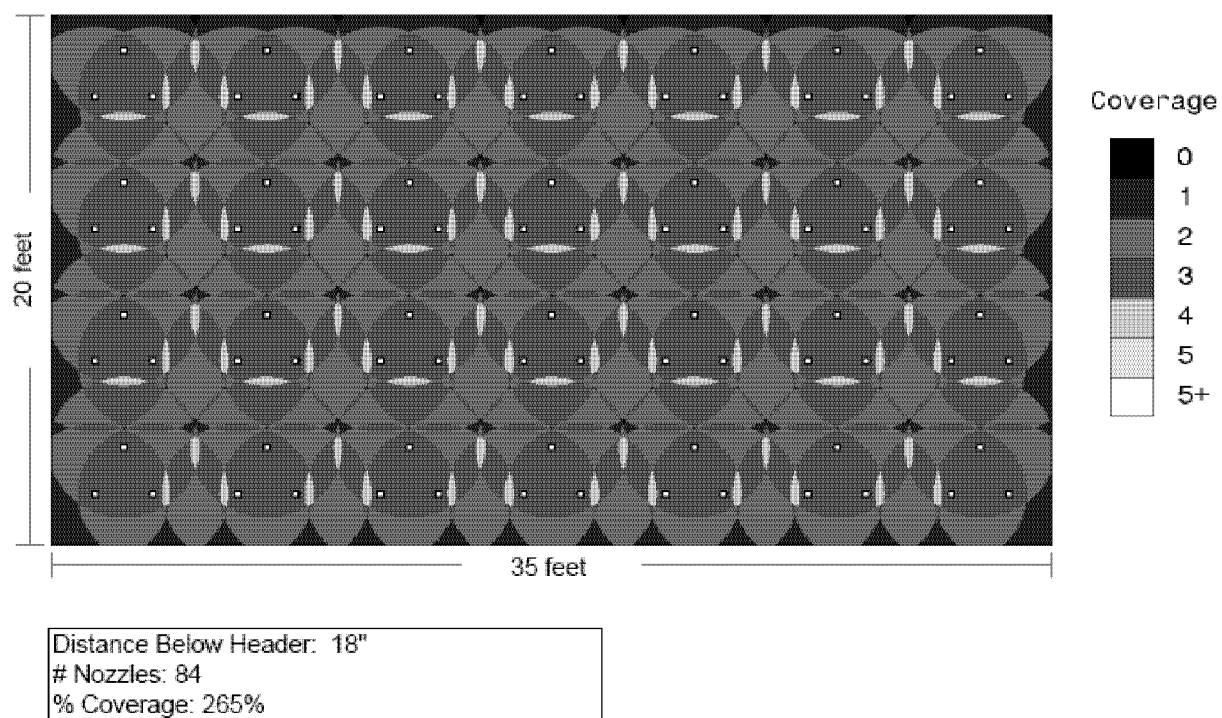
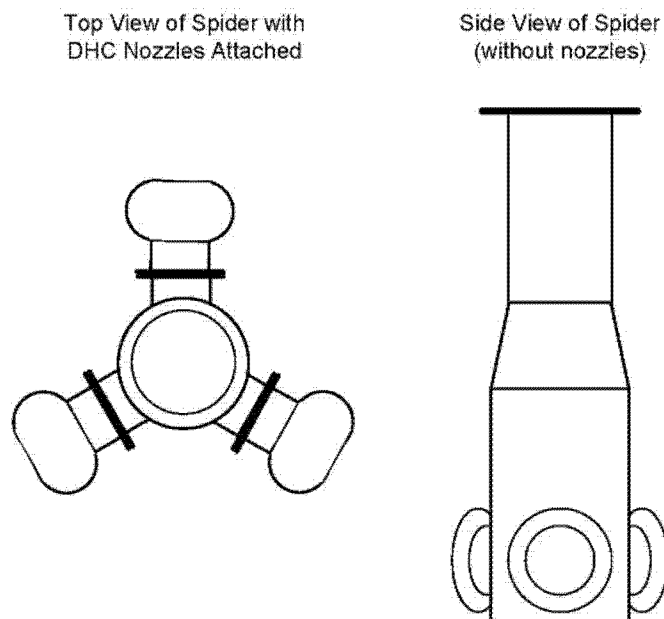


Figure 2-3. Spray Pattern from 28 Spiders, Each with Three Four-Inch DHC Nozzles



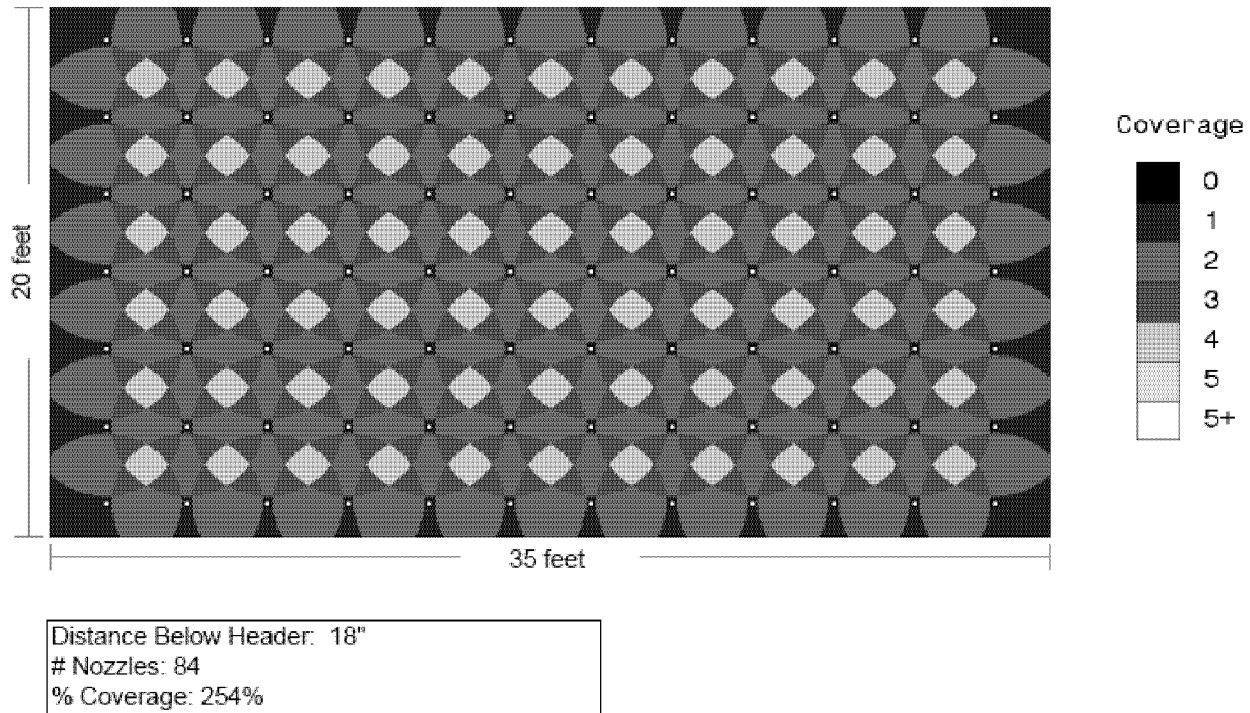


**Figure 2-4. Sketch of the Spider**

- Option 2 – Option 1 plus Move Quench Spray to Absorber Section.
  - Option 1 work scope
  - Remove the external FRP headers feeding the two existing quench spray levels and existing 20-inch FRP piping that fed those headers back to the 20-inch rubber-lined steel pipe flange.
  - Remove the existing internal headers, nozzles, and any non-structural internal beams or other items in the existing quench spray area. Repaired rubber lining at new wall penetrations.
  - Install new 20-inch abrasion-resistant FRP piping, supports, and expansion joints from the flange referred to above to the absorber section between the existing sprays and the top tray.
  - Relocate (raise by one foot) the existing absorber stiffener beams between the existing sprays and the top tray so they do not interfere with the new header/sprays described below.
  - Install six new 12-inch penetration spools (2205 duplex) and six new self-supporting internal headers and support brackets (2205 alloy) between the existing absorber spray and the top tray, approximately in the location of the existing internal absorber stiffener beams described above.

- Install 14 new high-efficiency 3-inch DHC nozzles on each of the six new internal headers for a total of 84 DHC nozzles. Each DHC nozzle has 133 gpm of flow for a total of 11,300 gpm for this new absorber spray section.
- Install 2205 duplex SS spray impingement plates on the walls just below the new spray headers/DHC nozzles.
- Repair the damage to the existing rubber lining incurred while relocating the beams and installing the new spray headers and the spray impingement plates.
- Remove the two existing trays. Reused the existing tray supports as much as possible.
- Install two new 2205 duplex high-efficiency trays with 37% net open area (versus 31.7% net open area for the existing trays).
- Conduct CFD modeling to evaluate gas and liquid flow patterns from the modified equipment to determine the extent of the wet-dry interface, alloy wall papering needed, and the design of an internal baffle to smooth the gas flow immediately upstream of the bottom tray.
- Install C-276 alloy wall papering in the new wet/dry interface areas and baffle as needed based on the CFD modeling.
- Remove existing rubber lining as needed to install the wall paper and the baffle.

Figure 2-5 on the next page shows the spray pattern from the 84 new three-inch DHC nozzles in the new lower spray header in the absorber section. The new spray coverage, measured 18 inches below the nozzles, is 254%.



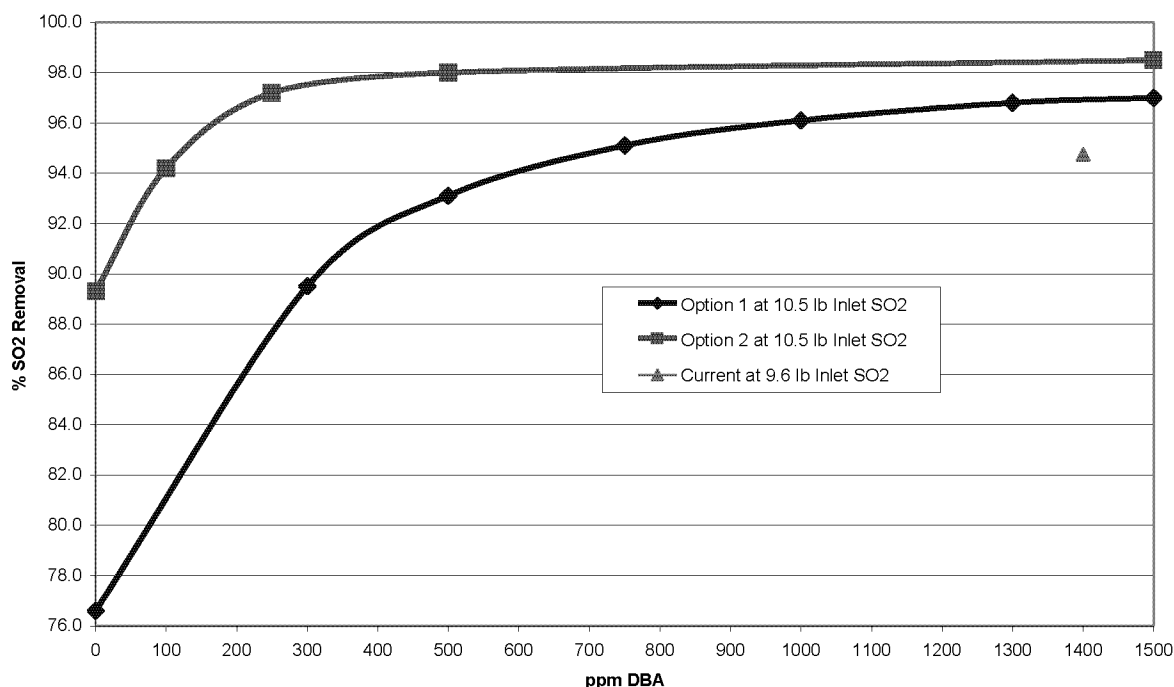
**Figure 2-5. Spray Pattern from the 84 Three-Inch DHC Nozzles at the New Lower Absorber Spray**

### 3.0 Process Analysis

To evaluate the potential benefits of improving the scrubbers at San Miguel by the options described in the previous section, we used the EPRI (Electric Power Research Institute) FGDPRIISM computer model. This model was developed by URS for EPRI to simulate a variety of lime and limestone FGD systems based on numerous investigations of laboratory, pilot, and full-scale FGD systems. Based on the data supplied from San Miguel on the current system design and operation, we applied the FGDPRIISM model to the existing layout and operating conditions and matched the currently observed SO<sub>2</sub> removal efficiency by adjusting the model's liquid and gas-side mass transfer coefficients.

The different options being considered were then examined for operation at a higher inlet SO<sub>2</sub> level of 10.5 lb SO<sub>2</sub> / MMBtu. As described earlier, Option 1 consists of modifications where the absorber spray header systems are upgraded to provide improved gas/liquid contacting as well as a change-out of the type of spray nozzles to the higher performing double hollow cone designs. The second option includes Option 1 modifications plus additional changes where the quencher sprays are redirected to the absorber side and a second spray header installed above the two sieve trays and the quencher is essentially converted into straight-through ductwork. The existing trays are replaced with new, high efficiency trays having more open area to accommodate the additional slurry flow without excessive pressure drop.

Figure 3-1 is a plot of the FGDPRIISM predictions for Options 1 and 2 with respect to SO<sub>2</sub> removal as a function of DBA concentration in the scrubbing liquor.



**Figure 3-1. FGDPRIISM Predictions for San Miguel FGD System Performance**

Also shown in Figure 3-1 is the current operating point, 94.75% SO<sub>2</sub> removal using 1400 ppm DBA with an inlet SO<sub>2</sub> level of 9.6 lb SO<sub>2</sub> / MMBtu.

Results of the modeling indicated that the modifications associated with Option 1 would result in the SO<sub>2</sub> removal efficiency being maintained at the 94.75% level while allowing the DBA concentration to be dropped to about 725 ppm (about 50% of current operation level). The predicted DBA consumption rate for this concentration is about 1.62 million lbs/yr as compared to the current consumption rate of about 3 million lbs/yr.

The FGDPRIISM modeling results for Option 2, which involves more extensive modifications to the absorbers, are also shown in Figure 3-1. The model predicted that the current removal level of 94.75% could be achieved with 10.5 lb inlet SO<sub>2</sub> using a DBA concentration of only 125 ppm. The predicted DBA consumption for this scenario is about 275,000 lbs/yr.

Table 3-1 presents a summary of the DBA concentrations and predicted consumption rates for the cases modeled by FGDPRIISM. The DBA losses are broken into the solution loss (the amount that is bled from the system with the product solids and liquid blowdown) and the



degradation loss (the amount that degrades into CO<sub>2</sub> and H<sub>2</sub>O or is co-precipitated with the calcium sulfite solids) components.

**Table 3-1. San Miguel DBA Consumption Predictions**

Summary of DBA Consumption Predictions						
Option	DBA Conc, ppm	% SO <sub>2</sub> Rem	DBA Consumption, lb/ton SO <sub>2</sub>		Total Consumption	
			Soln Loss	Deg. Loss	lb/ton SO <sub>2</sub>	lb/yr
Current	1400	94.75	12.8	6.7	19.5	3,000,000
1	725	94.75	6.6	3.2	9.8	1,620,000
1	1500	97	13.4	6.4	19.8	3,390,000
2	125	94.75	1.1	0.5	1.6	275,000
2	240	97	2.1	1.0	3.1	538,000
2	500	98	4.4	2.1	6.6	1,140,000

Note: Current case is based on 9.6 lb SO<sub>2</sub> lignite; Options 1 & 2 are based on 10.5 lb SO<sub>2</sub> lignite.

## 4.0 Cost Estimate

Section 2 described the scope of work for the two upgrade options. Table 4-1 summarizes the purchased equipment and materials that were included in the Option 1 and 2 cost estimates. Table 4-2 presents the estimate for the total installed costs for each. The estimated total project cost (engineering, procurement, and construction) for Option 1 is \$1,600,000 and for Option 2 is \$8,800,000.

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**Table 4-1. Summary of Purchased Equipment and Materials**

Description of Purchased Equipment and Materials			
OPTION 1		OPTION 2 INCREMENT OVER OPTION 1 (Continued)	
<i>Modification of Existing Recycle Slurry Spray Headers</i>		<i>Trays</i>	
Spiders, 1-6" inlet with 3-4" outlets, flanged, 2205 Duplex		37% Open Area Tray (2 per module; 4 modules total)	
DHC nozzles, 4", NBSC, 286 gpm each (includes 5% spares)		Tray Level Supports (includes main beams, cross channels, and wall brackets)	
Spray Impingement Plate, 2205 (includes wall attachment)		Rubber Liner Repair at Tray Level (1 ft high around perimeter per tray)	
Rubber Liner Repair at spray impingement plates			
<i>Fasteners &amp; Gaskets</i>		<i>External Recycle Pipe Supports</i>	
4" Nozzle Connections		20" Supports	
Fasteners, 2205 (4 per nozzle, 5/8") (includes 5% spares)		16" Supports	
Gaskets, EPDM (1 per conn., 1/8" thick) (includes 5% spares)		12" Supports	
6" Spider Connections		Spring Cans	
Fasteners, 2205 (4 per nozzle, 3/4") (includes 5% spares)		Structural Steel for Supports	
Gaskets, EPDM (1 per conn., 1/8" thick) (includes 5% spares)			
<i>Material Indirect Cost</i>		<i>Fasteners &amp; Gaskets</i>	
Freight (3.5% of material cost)		3" Nozzle Connections	
Vendor Field Services		Fasteners, 2205 (4 per nozzle, 5/8") (includes 5% spares)	
		Gaskets, EPDM (1 per conn., 1/8" thick) (includes 5% spares)	
		12" Penetration Spool Connections (2 per spool)	
		Fasteners, 2205 (12 per conn., 7/8") (includes 5% spares)	
		Gaskets, EPDM (1 per conn., 1/8" thick) (includes 5% spares)	
		20" External Recycle Pipe Connections (2 total)	
		Fasteners, Galvanized CS (20 per conn., 1-1/8") (includes 5% spares)	
		Gaskets, EPDM (1 per conn., 1/4" thick) (includes 5% spares)	
		<i>Relining of Absorber Internal Wall (wet/dry interface area only)</i>	
		Wall Paper, C276, 16 gauge, with 30% overlap	
		<i>Modifications for Flow Distribution</i>	
		Bullnose at transition from quench tower to absorber tower, C276, 1/4" plate	
		<i>Structural Modifications (Absorber Wall)</i>	
		Wall Stiffeners Modifications	
		Wall Repads at new spray level penetrations, Internal, CS	
		<i>Material Indirect Cost</i>	
		Freight (3.5% of material cost)	
		Vendor Field Services	

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**Table 4-2. Cost Estimate**

		Scope of Work and Estimated Costs	
		Option 1	Option 2
			(Includes Option 1)
		Scope of Work	Scope of Work
		a. New spiders to split the flow to 28 existing nozzles in absorber.	a. New spiders to split the flow to 28 existing nozzles in absorber.
		b. 84 new DHC nozzles, mounted on new spiders	b. 84 new DHC nozzles, mounted on new spiders
		c. Add spray impingement plates	c. Add spray impingement plates
			d. External FRP piping to relocate existing quench flow to absorber, above top tray
			e. New external FRP manifold, above top tray
			f. New internal headers, above top tray
			g. 48 new DHC nozzles on new headers
			h. Replace existing trays with two new high-efficiency trays
			i. Wall papering and assoc rubber lining removal
			j. New bull nose to distribute gas to bottom tray more evenly (if CFD modeling confirms need)
EP Contractor and Construction Contractor		Estimated Cost, \$	Estimated Cost, \$
EP Contractor -- Engineering and Purchased Equipment			
	Total EP Contractor Costs*	1,100,000	4,700,000
Construction Contractor -- Construction Materials and Labor**			
	Wall papering and bull nose materials***	0	1,100,000
	Other construction materials	50,000	150,000
	Construction labor and fees	450,000	2,850,000
	Total Construction Contractor Costs	500,000	4,100,000
Total Project Cost (Engineering, Procurement, Construction, Guarantees)		1,600,000	8,800,000
Notes:		* Includes 5% spares for nozzles, bolting and other small parts plus 15% contingency on purchased equipment. There is no markup on purchased equipment.	
		** The extent of wall papering and the materials need for the "bull nose" to more evenly distribute the gas to the first tray will not be known until a CFD study is completed as part of the detailed engineering design by the EP Contractor. This estimate assumes that the materials for wall papering and the bull nose will be purchased by the construction contractor (or by San Miguel) and will not be part of the equipment purchased by the EP Contractor.	
		*** Estimated cost for the wall papering materials, the bull nose, and associated construction labor is an approximation at this point.	



## **5.0 Economic Analysis**

Prior to the start of the upgrade program, the San Miguel FGD system required a DBA level of approximately 1400 ppm to achieve 94.75% SO<sub>2</sub> removal while firing lignite with an average sulfur content of 9.6 lb SO<sub>2</sub> per million Btu. This DBA level resulted in an annual consumption of around three million pounds of DBA (dry basis). At the then current DBA price of \$0.90 per pound (dry basis), the annual cost of DBA was about \$2.7 million dollars.

By installing the Option 1 upgrade described earlier, the required DBA level to achieve 94.75% SO<sub>2</sub> removal with a 10.5 lb SO<sub>2</sub> per million Btu fuel was predicted by the FGDPRIISM process model to be about 725 ppm. Based on URS's experience that the DBA feed rate would decrease directly proportional to the concentration in the scrubbing slurry, the annual consumption would drop to about 1.62 million lb per year. At a DBA cost at \$0.90 per lb. this would be about \$1.46 million per year. An Option 1 upgrade was projected to reduce San Miguel's annual DBA cost by nearly \$1.3 million even with nearly 10% more sulfur in the lignite. With the Option 2 upgrade described earlier, the required DBA level to achieve 94.75% SO<sub>2</sub> removal with 10.5 lb SO<sub>2</sub> per million Btu lignite was projected to be about 125 ppm, the DBA use would be about 0.28 million lb per year, and the annual DBA cost at \$0.90 / lb. would be about \$0.25 million. The Option 2 upgrade was projected to reduce San Miguel's DBA cost by nearly \$2.5 million, again, at the higher sulfur level in the lignite.

Table 5-1 on the next page summarizes the cost savings for these two options, the associated costs of the upgrades, and the simple payback period of each for the current 94.75% SO<sub>2</sub> removal situation. This analysis does not consider potential benefits from the sale of SO<sub>2</sub> allowances should a trading program be established in Texas. The payout for Option 1 is around 1.3 years and for Option 2 it is around 3.6 years.



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**Table 5-1. Comparative Economics for Original (pre-2010) FGD Operations versus Upgrade Options 1 and 2**

SO2 Removal	94.75%					97.0%					98.0%				
DBA Price, \$/lb dry	0.90					0.90					0.90				
	DBA Use Million Lb/yr	DBA Cost \$Million	Cost Savings \$Million/yr	Upgrade Cost \$Million	Upgrade Payback Period Years	DBA Use Million Lb/yr	DBA Cost \$Million	Cost Savings \$Million/yr	Upgrade Cost \$Million	Upgrade Payback Period Years	DBA Use Million Lb/yr	DBA Cost \$Million	Cost Savings \$Million/yr	Upgrade Cost \$Million	Upgrade Payback Period Years
<b>Case</b>															
Current equipment	3.00	2.70		0		NA	NA		NA		NA	NA		NA	
Option 1	1.62	1.46		1.60		3.39	3.05		1.60		NA	NA		NA	
Option 2	0.28	0.25		8.80		0.54	0.48		8.80		1.14	1.03		8.80	
Option 1 vs Current	-1.38	-1.24	1.24	1.60	1.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Option 2 vs Current	-2.73	-2.45	2.45	8.80	3.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Option 2 vs Option 1	-1.35	-1.21	1.21	7.20	5.93	-2.85	-2.57	2.57	7.20	2.80	NA	NA	NA	NA	NA
DBA Price, \$/lb dry	1.20					1.20					1.20				
	DBA Use Million Lb/yr	DBA Cost \$Million	Cost Savings \$Million/yr	Upgrade Cost \$Million	Upgrade Payback Period Years	DBA Use Million Lb/yr	DBA Cost \$Million	Cost Savings \$Million/yr	Upgrade Cost \$Million	Upgrade Payback Period Years	DBA Use Million Lb/yr	DBA Cost \$Million	Cost Savings \$Million/yr	Upgrade Cost \$Million	Upgrade Payback Period Years
<b>Case</b>															
Current equipment	3.00	3.60		0		NA	NA		NA		NA	NA		NA	
Option 1	1.62	1.95		1.60		3.39	4.07		1.60		NA	NA		NA	
Option 2	0.28	0.33		8.80		0.54	0.65		8.80		1.14	1.37		8.80	
Option 1 vs Current	-1.38	-1.65	1.65	1.60	0.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Option 2 vs Current	-2.73	-3.27	3.27	8.80	2.69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Option 2 vs Option 1	-1.35	-1.62	1.62	7.20	4.45	-2.85	-3.42	3.42	7.20	2.10	NA	NA	NA	NA	NA



## **6.0 Project Schedule**

Based on vendor inquiries URS had made at the time of the study, all of the material needed for both options could be delivered by the March 2010. However, there was not enough time for URS to complete enough detailed design work to be able to order all the equipment needed for Option 2. The schedule did allow time to implement Option 1 during the March 23 - April 30, 2010 outage.

## **7.0 Study Conclusions**

Based on the process model results the two options evaluated offered San Miguel the ability to substantially reduce absorber DBA concentration and therefore consumption with the current lignite sulfur content of 9.6 lb SO<sub>2</sub> / MMBtu coal and the current SO<sub>2</sub> removal level of 94.75%. Option 1 was the lowest cost and was recommended for implementation first. Option 2 being higher in cost was not implemented until 2012 and as described below was aimed primarily at achieving compliance with the original version of the Cross State Air Pollution Rule promulgated in 2011.

## **8.0 Addendum – Interim Results of Implementation of Option 1 and 2 FGD Improvements**

This section presents and discusses the results of upgrading the San Miguel FGD system with both Options 1 and 2 since the improvements were implemented up to the current date of June 27, 2014. While successful in achieving the desired reduction in DBA concentration, the process has taken much longer and proven more challenging than expected. URS has had to expend significant costs and resources to achieve the performance improvements. San Miguel has supported the URS initiatives by providing the labor to install equipment modifications that have been necessary and assisting in additional testing of the absorbers. The work has been a joint and cooperative with both parties participating in a collaborative fashion.

San Miguel contracted with URS to install the Option 1 improvements in all four modules during the spring 2010 scheduled unit outage. The system was tested shortly after startup and the performance met or exceeded guarantees. To achieve an average SO<sub>2</sub> removal efficiency of about 95% removal prior to the Option 1 improvements required the absorbers to operate at a DBA concentration of about 1,400 ppm. The absorbers were able to operate at a DBA concentration of around 700 ppm and achieve 95% SO<sub>2</sub> removal, effectively cutting in half the required levels of DBA.

Not long after the Option 1 improvements were installed, the Clean Air Interstate Rule (CAIR) was replaced by the Cross State Air Pollution Rule (CSAPR) in the summer of 2011. This rule required significant reductions in the annual SO<sub>2</sub> emissions from San Miguel unit. URS was contracted in September 2011 to begin work on the detailed engineering of the Option 2 improvements described above in Table 4.1 so that the unit could be kept in compliance with the new CSAPR requirements.



At the time, San Miguel conducted with URS's assistance a test of the FGD system to quantify the performance of the absorbers after 1.5 years of operation and in a "seasoned" condition, meaning partially scaled and plugged components in the absorber internals (nozzles, spray headers, trays, mist eliminators, etc.). This test which was done in August 2011 revealed that the SO<sub>2</sub> removal performance of the absorbers had degraded measurably relative to the performance test done shortly after the Option 1 improvements were installed in April 2010. Given the very high inlet sulfur dioxide concentrations in the flue gas entering the San Miguel FGD system, this result is not surprising. Any shortfall in the gas/liquid contact area is magnified to a much greater extent than in the typical FGD system in the U.S.

The test results from August 2011 showed that the absorbers required over 50% more DBA in solution to maintain a nominal SO<sub>2</sub> removal efficiency of 95% as compared to the testing conducted shortly after the Option 1 improvements were made in the spring of 2010.

The Option 2 improvements were installed in the spring outage of 2012.

Table 8.1 presents results of a number of tests which were conducted over the course of time from when both the upgrades had been completed until present day. The first line in the Table shows the baseline SO<sub>2</sub> removal efficiency and required DBA concentration for the FGD system prior to the absorbers being upgraded. As mentioned earlier, under typical conditions, the absorbers needed about 1,400 ppm of DBA to achieve nominally 95% SO<sub>2</sub> removal.

Results from the first test conducted shortly after the spring outage of 2012 and after the Option 2 improvements were installed indicated that the absorbers were not performing anywhere near expectations. At that time, URS initiated a significant corrective action program to identify the reason for the performance shortfall and to come up with the best solutions.

This work identified a number of possible causes for the performance shortfall including:

- 1) Low tray pressure drop
- 2) Trays coming detached from their supports allowing flue gas bypass and/or uplifting in the center area
- 3) The new wall ring obstructing flow of recycle slurry to the top tray
- 4) Low recycle pump flow due to eroded impellers
- 5) Poor quencher and absorber tank agitation
- 6) Short circuiting of slurry in the recycle tanks
- 7) Mal-distribution of slurry to the upper tray
- 8) Mal-distribution of flue gas from absorber to absorber



Date	Load, MW	Average Absorber DBA, mg/L	Stack CEMS SO <sub>2</sub> , lbs/MMBtu	Average Module pH	Measured FGD Removal Efficiency, %	Guaranteed FGD Removal Efficiency, %	Measured vs Guaranteed Performance
<b>Pre Upgrade</b>	430	1400	0.50	5.9	94.8%	-	-
4/26/2012	430	1670	0.71	5.9	93.2%	98.5%	-5.3%
1/16/2013	430	710	0.63	5.9	93.0%	97.5%	-4.5%
4/15/2013	430	230	0.61	6.15	93.5%	91.5%	2.0%
10/31/2013	435	838	0.31	6.1	96.9%	97.9%	-1.0%
10/31/2013	431	841	0.25	6.1	97.5%	97.9%	-0.4%
11/1/2013	430	782	0.29	6.15	97.1%	97.8%	-0.7%
11/1/2013	430	663	0.62	5.96	93.8%	97.5%	-3.7%
5/15/2014	415	504	0.39	5.96	96.1%	96.0%	0.1%
5/25/2014	431	250	0.56	5.95	93.8%	91.8%	2.0%
6/20/2014	432	275	0.69	5.94	91.9%	92.5%	-0.6%
6/21/2014	431	530	0.56	5.95	93.4%	96.0%	-2.6%
6/25/2014	435	430	0.45	6.02	94.7%	95.4%	-0.7%

Table 8.1. Results of FGD testing from April 2012 through June 2014

The first problem that was solved was the lower than expected pressure drop. This required the reduction in the open area of the trays using thin pieces of stainless steel to block off holes. The result was some improvement in the system SO<sub>2</sub> performance but not as much as expected.

Inspections of the internals of the absorbers revealed that some of the trays had come loose from their supports allowing them to lift and therefore bypass flue gas around this critical scrubbing zone. An improved method of attaching the trays to their supports solved this problem around the perimeter of the tower and also clamps were installed in the center of the tower to make sure the trays remained flat. These improvements were added in the fall of 2012. Significant performance improvements were not seen after these were added.

URS conducted CFD modeling of both the absorber and quencher tanks to investigate if there was any short-circuiting of slurry from the down-comers directly to the recycle pump suctions. Short-circuiting can be very detrimental to SO<sub>2</sub> removal and can lead to rapid scaling inside the absorbers and in downstream equipment. The CFD results did not identify any problems and showed that the agitators were providing very good mixing in each tank. San Miguel replaced all the original tank agitators in the 2011 to 2012 time frame with newer models that give better tank agitation. URS modeled the power inputs and prop speed of these new agitators. Figure 8.1 is an example output from this tank modeling.

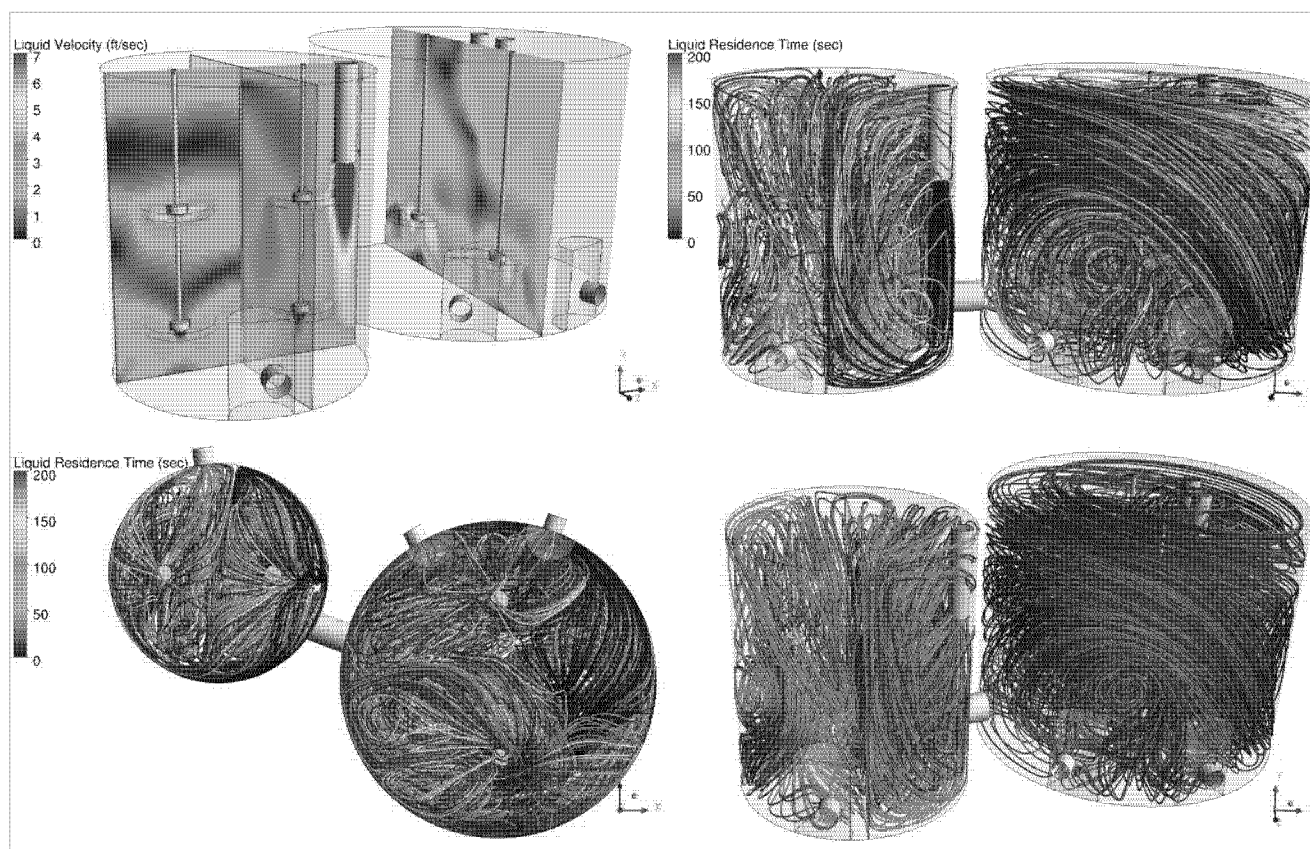


Figure 8.1. Graphics from CFD modeling study of San Miguel FGD reaction tanks

To determine if there were any problems with gas/liquid distribution inside the absorber in the key scrubbing zones around the spray headers and counter-flow trays, URS conducted a CFD study in that area of the system. This modeling did turn up a potential problem in that the new high efficiency double hollow cone spray nozzles could be impacting the walls of the towers and channeling slurry down to the tray in an irregular fashion. The new spray nozzles are designed for a 120 degree cone angle, which is wider than the old nozzles. The wider angle nozzles are important to maximize SO<sub>2</sub> scrubbing from the spray headers. URS has used these exact nozzles and a very specific nozzle-to-nozzle spacing to achieve maximum SO<sub>2</sub> removal efficiency from absorbers with limited recycle pump capacity as at San Miguel. There were no detrimental effects in these other absorbers, but then again they do not operate anywhere near the fuel sulfur levels at San Miguel.

The consequence of using the wider cone angle nozzle can be seen in Figure 8.2.

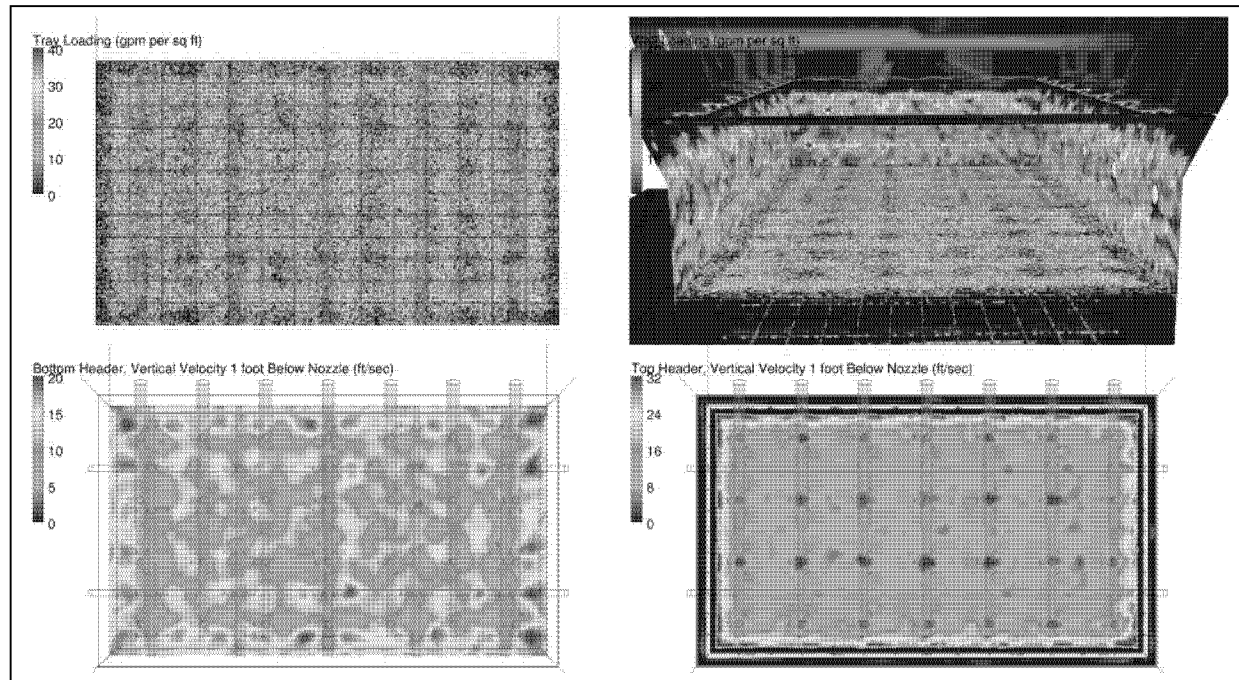


Figure 8.2. Results of CFD study of San Miguel absorber internals

The upper right CFD image shows that there is a fairly significant amount of slurry from the two spray headers that impacts the walls of the towers. While this is a normal occurrence in many other spray/tray FGD systems, the conditions at San Miguel with the much higher incoming SO<sub>2</sub> means that highly efficient gas/liquid mixing must occur in all areas of the tower with no margin. So URS redesigned the upper tray to minimize the number and height of the partition walls on the outer areas of the tray. Modeling showed that the new trays would even out the recycle slurry distribution on the tray, allowing slurry coming down the walls to spread out horizontally and evenly flood the tray. Figures 8.3 and 8.4 show the before and after slurry distribution to the upper tray, respectively. Given the flow improvement that could be achieved by redesigning about half of the upper tray compartments, URS procured new sets in late 2013 for installation in the spring 2014 outage.

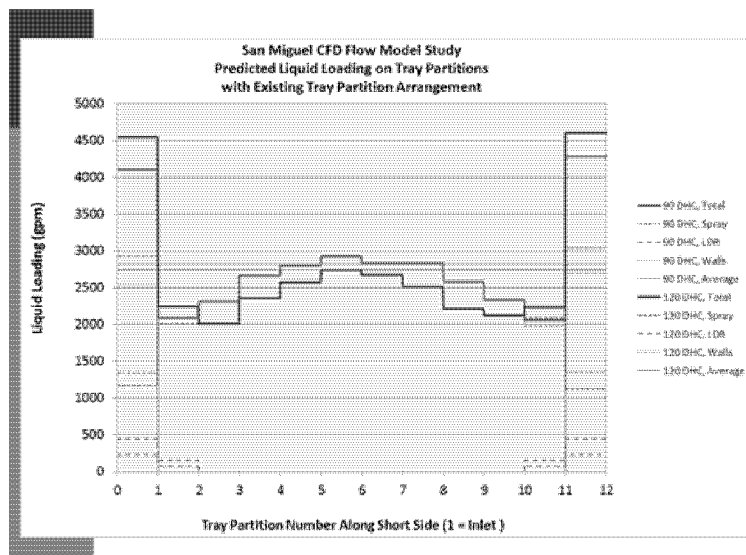


Figure 8.3. Results of CFD evaluation showing uneven distribution of slurry to the upper tray

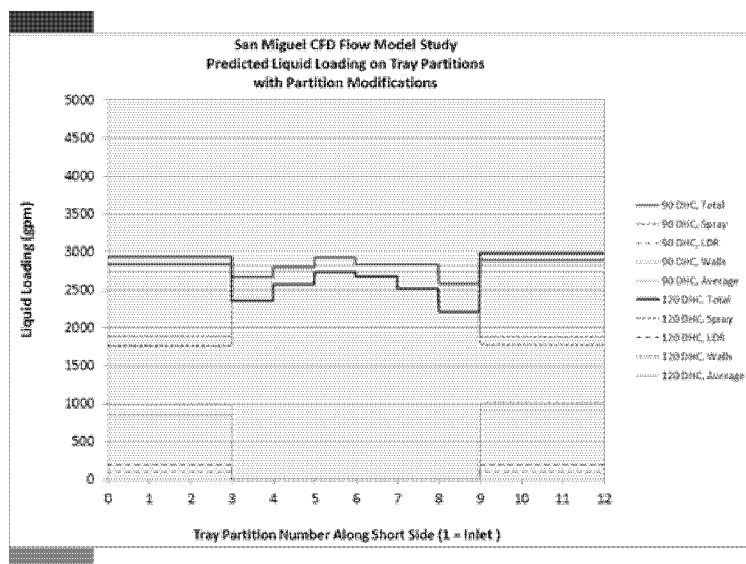


Figure 8.4. Results of CFD evaluation showing improved distribution of slurry to modified upper tray

Numerous times during the last two years URS has conducted traverses of each of the four absorber outlet ducts in an effort to determine if one or more of the absorbers was having a problem causing the stack SO<sub>2</sub> to be elevated. There were no problems that were clearly identified from this work. It did show that in general the gas flowing near the outer areas of the absorber walls had very low SO<sub>2</sub> concentrations as compared to the inner area where the SO<sub>2</sub>

was highest. Figure 8.5 is an example of the SO<sub>2</sub> profile that was typically seen during these traverses.

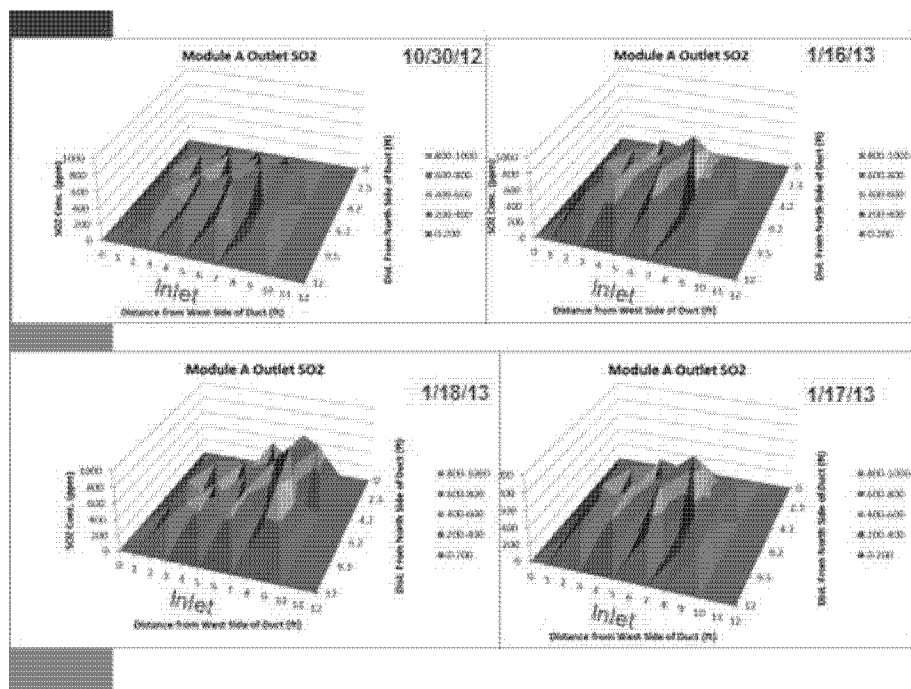


Figure 8.5. Example of SO<sub>2</sub> gas traverses of the outlet duct of the A module

The results in the figure graphically show how the flue gas in the center part of the duct just above the absorber mist eliminators has much more SO<sub>2</sub> in the middle area as compared to the perimeter. This supported the CFD modeling results of the absorber internals discussed earlier. Those results showed a significant portion of the recycle slurry was trapped around the outer areas of the trays. This heavy slurry loading on the outer regions of the tray would provide better SO<sub>2</sub> scrubbing in that area. However, the heavy loading will force flue gas into the middle areas of the tray where there is less resistance due to a lower slurry loading. The combination of more flue gas passing through the center of the tray and proportionally less slurry there would have an overall detrimental effect on SO<sub>2</sub> removal. These observations supported URS's decision to pay for new trays in an effort to solve this problem and help boost overall SO<sub>2</sub> removal by improving gas/slurry contact. These trays were installed by plant personnel during the recent spring 2014 outage.

Another area that could cause lower SO<sub>2</sub> removal of the upgraded system was the physical condition of the absorber recycle pumps. These large capacity pumps need to be running at or near their rated outputs to allow the upgraded system to perform as designed. A common problem with older recycle pumps is worn impellers. Figure 8.6 shows a photo of one of the pump impellers taken during the fall 2012 outage. This impellor has significant wear and would not be expected to be able to pump at design capacity. Plant maintenance staff keep track of the



conditions of the pumps and this particular pump impellor was in line for replacement. San Miguel made a concerted effort to inspect and replace all excessively worn pump impellors to return the pumps to good operation condition. Subsequently, new pressure gauges were installed on the recycle pump discharge piping to confirm that the pumps are operating satisfactorily. These have been tracked over the past year and for all pumps, the pressures indicate that the pumps are flowing at design levels.



Figure 8.6. Inspection of San Miguel FGD Recycle Pump Showing Worn Impellor

## 9.0 Summary

Significant troubleshooting efforts have been completed by URS and San Miguel since the Option 2 improvements were installed in the spring outage of 2012. From all available information (flue gas and pump flows, absorber chemistry, absorber internals, CFD and process modeling, etc.), it appears the FGD system is currently operating as intended both from a chemical and physical design standpoint. Referring back to Table 8.1, the most recent performance data collected with the unit at full load during May and June, shows that the FGD system is achieving 94 to 95% SO<sub>2</sub> removal efficiency at absorber DBA concentrations of about 400 ppm. As mentioned earlier, prior to the Option 1 and 2 upgrades, to achieve 94 to 95% removal typically required an absorber DBA concentration of 1,400 ppm.



The current required DBA concentration of about 400 ppm is what was expected from the absorber upgrades for a target SO<sub>2</sub> removal in the range of 94 to 95%. The various re-work items described above completed in the past two years each contributed to achieving the goal. The redesigned trays were the latest improvement and resulted in the final incremental boost in performance.

It should also be noted that improvements made in the FGD area, specifically in the rake upgrade in the T1 tank and conveyor improvements in the filter building, have allowed the absorbers to be controlled at higher thiosulfate concentrations and therefore lower sulfite oxidation levels. This is very important since it has proven very challenging to maintain consistent control of the absorber chemistry – in particular sufficient concentrations of thiosulfate in the absorber slurry – to keep the sulfite oxidation levels in the desired range which is 5 to 10%, to minimize chemical scaling inside the absorbers. This scaling would occur whenever the thickeners or T1 had to be bypassed for cleaning due to pluggage of the equipment, or failure of the drum filters/conveyors/pug mill in FGD. The root cause of the problem was that the desirable, low oxidation conditions also brought with them the production of more pure calcium sulfite crystals, which settled much more rapidly causing problems with the dewatering systems that were not originally designed to handle them.

Since the upgrades to the dewatering system, the feed rate of emulsified sulfur has been much more regular and there have been fewer cases of absorber blowdown slurry being sent directly to the pond which increases chemical consumption rates. Consistent operation of higher thiosulfate residuals in the quencher and absorber tanks has been the result. This will maintain cleaner conditions within the absorber towers and help the overall system to operate more efficiently for longer periods of time.

URS and San Miguel recently conducted a final performance test in association with the FGD upgrade program. The tests were completed on 6/27/14 and within a month from that date the results should be available for review.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/22/2015 8:29:03 AM  
**Subject:** Accepted: TX/OK RH Comments

---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 5/22/2015 7:17:47 AM  
**Subject:** Accepted: TX/OK RH Comments

---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 5/12/2015 10:02:31 AM  
**Subject:** Conf code is not working

Katie Hanks  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
(919) 316-3732  
(919) 541-7155 (fax)

---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 5/11/2015 12:10:15 PM  
**Subject:** Accepted: TX RH RTI Comment Categorization

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/11/2015 11:26:59 AM  
**Subject:** Accepted: TX RH RTI Comment Categorization

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Collins, JoLynn  
**Sent:** 4/29/2015 10:37:52 AM  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

That sounds good to me. I'll let Katie know that for technical questions, she can contact Joe directly and just cc you and me. Thanks!

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, April 29, 2015 10:37 AM  
**To:** Heller, Katherine B.  
**Cc:** Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Hi Kathy,  
I consider yesterday's meeting to have been the official start to RTI's support with respect to comment categorization. At this time, I am comfortable letting Katie and Joe coordinate directly as needed on technical issues.

For project related communication going forward, I propose that you and I be cc'd on email communication between Joe and Katie, and that we no longer include JoLynn Collins. We will of course continue to include JoLynn on any communication that is contract related.

Is that acceptable to you?  
Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Hanks, Katie P. [mailto:kphanks@rti.org]  
**Sent:** Wednesday, April 29, 2015 8:59 AM  
**To:** Heller, Katherine B.; Belk, Ellen  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

This is very helpful.

# Ex. 5 - Deliberative

Katie Hanks  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
(919) 316-3732  
(919) 541-7155 (fax)



**From:** Heller, Katherine B.  
**Sent:** Wednesday, April 29, 2015 9:16 AM  
**To:** Belk, Ellen; Hanks, Katie P.  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** RE: TX-OK Comment Categorization -- mtg followup

Ellen,  
Thanks very much for the SMU background file and this very detailed direction for our comment support. We'll get started and be in touch if we have any questions or concerns.

Best,  
Kathy

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Tuesday, April 28, 2015 4:43 PM  
**To:** Heller, Katherine B.; Hanks, Katie P.  
**Cc:** Kordzi, Joe; Collins, JoLynn  
**Subject:** TX-OK Comment Categorization -- mtg followup

Thank you very much for discussion earlier today.

For comment categorization, we have the following priorities/preferences/requests:

# Ex. 5 - Deliberative

# Ex. 5 - Deliberative

We look forward to talking with you further in two weeks, and have set up a meeting for May 12<sup>th</sup> at 9:30 am.

If you have questions or if there is additional information that would be helpful please let us know.

I will send background materials in a separate email message.

*Ellen H. Belk*

Environmental Engineer

U.S. EPA Region 6

Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 4/28/2015 6:50:52 AM  
**Subject:** Accepted: TX RH Contractor Support - Comments

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 4/27/2015 2:56:29 PM  
**Subject:** Accepted: TX RH Contractor Support - Comments

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 4/27/2015 2:40:01 PM  
**Subject:** RE: checking in

Hi, Ellen-

Assuming those are Texas times, 9:30 a.m. your time/10:30 a.m. our time would work well. It appears that Katie may not be available tomorrow afternoon.

Kathy

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, April 27, 2015 2:28 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: checking in

Hi Kathy,

I would like to set up a time for us to talk briefly tomorrow, including Katie and Joe. Times that are good for us are 9:30 am and 1 pm. Do either of those work for you? Or when is good for you?

Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, April 24, 2015 10:06 AM  
**To:** Belk, Ellen  
**Subject:** RE: checking in

Hi, Ellen-

Thanks for responding so quickly! We're in no rush if you are not, but wanted to make sure we weren't missing anything.

I'll be monitoring email but will be out of the office this afternoon. If you want to talk it looks as though Katie is in the office today, or we could chat on Monday.

Thanks,

Kathy

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, April 23, 2015 4:15 PM  
**To:** Heller, Katherine B.  
**Cc:** Hanks, Katie P.  
**Subject:** RE: checking in

Hi Kathy,

I have received your message and plan to get back to you tomorrow, likely in the afternoon.

Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, April 23, 2015 1:18 PM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** checking in

Hi, Ellen-

Katie and I wanted to touch base now that the comment period had ended. I believe we are awaiting an outline and specific TD from you, but we wanted to make certain that we shouldn't be moving forward on the comments at this time.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 4/24/2015 11:05:46 AM  
**Subject:** RE: checking in

Hi, Ellen-

Thanks for responding so quickly! We're in no rush if you are not, but wanted to make sure we weren't missing anything.

I'll be monitoring email but will be out of the office this afternoon. If you want to talk it looks as though Katie is in the office today, or we could chat on Monday.

Thanks,

Kathy

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, April 23, 2015 4:15 PM  
**To:** Heller, Katherine B.  
**Cc:** Hanks, Katie P.  
**Subject:** RE: checking in

Hi Kathy,

I have received your message and plan to get back to you tomorrow, likely in the afternoon.

Thanks,

Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, April 23, 2015 1:18 PM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** checking in

Hi, Ellen-

Katie and I wanted to touch base now that the comment period had ended. I believe we are awaiting an outline and specific TD from you, but we wanted to make certain that we shouldn't be moving forward on the comments at this time.

Thanks,

**Katherine Heller**  
Senior Economist  
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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 4/23/2015 2:18:00 PM  
**Subject:** checking in

Hi, Ellen-

Katie and I wanted to touch base now that the comment period had ended. I believe we are awaiting an outline and specific TD from you, but we wanted to make certain that we shouldn't be moving forward on the comments at this time.

Thanks,

**Katherine Heller**

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 4/1/2015 4:59:15 PM  
**Subject:** Accepted: TX RH Evaluation - RTI support for response to comments (discussion with RTI)

---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 4/1/2015 3:57:34 PM  
**Subject:** Accepted: TX RH Evaluation - RTI support for response to comments (discussion with RTI)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 3/25/2015 3:12:56 PM  
**Subject:** RE: April 20th and following

Dr. Fox responded that she should be able to plan her schedule to have availability.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, March 25, 2015 2:44 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: April 20th and following

Great. Thank you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, March 24, 2015 8:30 AM  
**To:** Belk, Ellen  
**Subject:** RE: April 20th and following

Hi, Ellen-  
I will be happy to touch base with Dr. Fox and let you know of her availability during that time.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, March 23, 2015 4:57 PM  
**To:** Heller, Katherine B.  
**Subject:** April 20th and following

Katherine,

As you likely recall, the comment period for the Texas regional haze action closes on April 20<sup>th</sup>. Would you please contact Dr. Fox to inquire about her availability in May and June? Although at this time we do not know exactly what comments will be received, we would appreciate knowing whether or not her schedule would allow for consultation if needed.

Of course, if there were to be any consultation, we would need to have the contract mechanism in place for the next period of performance, and would include RTI in any communication.

Thank you very much.

Ellen

*Ellen H. Belk*  
Environmental Engineer  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 3/24/2015 9:29:49 AM  
**Subject:** RE: April 20th and following

Hi, Ellen-

I will be happy to touch base with Dr. Fox and let you know of her availability during that time.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, March 23, 2015 4:57 PM  
**To:** Heller, Katherine B.  
**Subject:** April 20th and following

Katherine,

As you likely recall, the comment period for the Texas regional haze action closes on April 20<sup>th</sup>. Would you please contact Dr. Fox to inquire about her availability in May and June? Although at this time we do not know exactly what comments will be received, we would appreciate knowing whether or not her schedule would allow for consultation if needed.

Of course, if there were to be any consultation, we would need to have the contract mechanism in place for the next period of performance, and would include RTI in any communication.

Thank you very much.

Ellen

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/26/2015 2:08:43 PM  
**Subject:** Accepted: TX RH Evaluation - Contractor support for Response to Comments - placeholder in case it works to meet with RTI

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 1/21/2015 11:03:52 AM  
**Subject:** checking in

Hi, Ellen-

As I recall, we had tentatively said we would touch base again in late January, after your public meetings and when you had a feel for the type and scale of public comment. Let us know if you wish to chat!

Thanks,

**Katherine Heller**

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---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**CC:** Heller, Katherine B.  
**Sent:** 12/30/2014 12:18:12 PM  
**Subject:** RE: Possible support for response to comments  
**Attachments:** Assumptions\_R6Haze\_comments.docx

Here are the assumptions I made regarding the comment handling process options.

Katie Hanks  
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(919) 316-3732  
(919) 541-7155 (fax)

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Tuesday, December 30, 2014 12:05 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Possible support for response to comments

Sure, I did take notes, but always good to have it directly.

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Tuesday, December 30, 2014 11:04 AM  
**To:** Belk, Ellen  
**Subject:** RE: Possible support for response to comments

That makes sense. Would it be helpful for Katie to send her list of assumptions about comments, or did you capture all that during the call?

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Tuesday, December 30, 2014 12:03 PM  
**To:** Heller, Katherine B.  
**Subject:** Possible support for response to comments

Hi Katherine and Katie,  
Thank you for the information.  
Before I set up a future call, let's wait until we have had the hearings, and until I have had a chance to talk further with the team  
Thanks again for the call today.  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/30/2014 12:03:58 PM  
**Subject:** RE: Possible support for response to comments

That makes sense. Would it be helpful for Katie to send her list of assumptions about comments, or did you capture all that during the call?

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, December 30, 2014 12:03 PM  
**To:** Heller, Katherine B.  
**Subject:** Possible support for response to comments

Hi Katherine and Katie,  
Thank you for the information.  
Before I set up a future call, let's wait until we have had the hearings, and until I have had a chance to talk further with the team  
Thanks again for the call today.  
Ellen

*Ellen Belk*  
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---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 12/30/2014 6:59:14 AM  
**Subject:** Accepted: FW: Texas regional haze contracting

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/29/2014 10:27:57 AM  
**Subject:** Accepted: Texas regional haze contracting

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 12/29/2014 10:00:43 AM  
**Subject:** RE: available for a short call today?

Ellen,  
Katie is out of the office today. It appears that she is in tomorrow and has the morning open. Shall we tentatively schedule a call for 11 a.m. our time, 10 a.m. your time? It also appears that she has 9:30 to 10:30 and 1 pm to 4 pm your time available on Wednesday.

I've sent her an email but I'm not sure whether she will have access or not. If not, we may need to wait until tomorrow to finalize the plans.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, December 29, 2014 8:25 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: available for a short call today?

Hi Katherine,  
I was out unexpectedly last week with an illness, but am better and back at work.  
Anytime except between 11 – 1 pm central time would work today, tomorrow, Wed or Fri.  
Ellen

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 22, 2014 10:55 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** available for a short call today?

Hi, Ellen-  
I hope you are well. Katie and I wondered if you would be available for a short call at 11 your time. I will be in the office until about 1 pm your time; Katie will be available throughout the afternoon, and no need to wait until I am available. So if 11 does not work for you, please suggest a convenient time. I don't think the call will take more than 30 minutes.

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/29/2014 9:51:51 AM  
**Subject:** RE: available for a short call today?

Ellen-  
Glad you are feeling better. Let me check Katie's schedule, and I will get back in touch.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, December 29, 2014 8:25 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: available for a short call today?

Hi Katherine,  
I was out unexpectedly last week [Ex. 6 - Personal Privacy]  
Anytime except between 11 – 1 pm central time would work today, tomorrow, Wed or Fri.  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 22, 2014 10:55 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** available for a short call today?

Hi, Ellen-  
I hope you are well. Katie and I wondered if you would be available for a short call at 11 your time. I will be in the office until about 1 pm your time; Katie will be available throughout the afternoon, and no need to wait until I am available. So if 11 does not work for you, please suggest a convenient time. I don't think the call will take more than 30 minutes.

Thanks,

**Katherine Heller**  
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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 12/22/2014 11:54:46 AM  
**Subject:** available for a short call today?

Hi, Ellen-

I hope you are well. Katie and I wondered if you would be available for a short call at 11 your time. I will be in the office until about 1 pm your time; Katie will be available throughout the afternoon, and no need to wait until I am available. So if 11 does not work for you, please suggest a convenient time. I don't think the call will take more than 30 minutes.

Thanks,

**Katherine Heller**

Senior Economist

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/16/2014 11:25:22 AM  
**Subject:** RE: info about the rule?

Thanks Ellen-we don't need the official version, just an idea of the scope and issues involved.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, December 16, 2014 11:24 AM  
**To:** Heller, Katherine B.  
**Subject:** FW: info about the rule?

Hi Katherine,

Although we do not have the published version yet, there is a pre-publication version on the Region 6 website:

<http://www.epa.gov/region6/newsevents/index.html>

---

EPA announces proposed action to reduce harmful emissions of sulfur dioxide and improve visibility in Texas and Oklahoma  
The U.S. Environmental Protection Agency (EPA) announced a proposed action to reduce harmful emissions of sulfur dioxide (SO<sub>2</sub>) to improve visibility at some of Texas' and Oklahoma's most treasured parks and wilderness areas. After a thorough review, EPA has proposed to partially approve and partially disapprove the state of Texas' regional haze plan intended to meet federal Clean Air Act requirements for improving visibility and reducing haze in the nation's national parks and wilderness areas. After being published in the Federal Register, the proposed plan will be open to a 60-day public comment period. EPA will also hold a public hearing in Austin on January 13, 2015, and one in Oklahoma City on January 15, 2013. Oklahoma will also benefit from this action to control pollution from Texas facilities and will achieve visibility improvements faster than the Oklahoma Department of Environmental Quality (ODEQ) proposed in their rate of progress plan for visibility improvements for reducing regional haze impacts in the Wichita Mountains. There are no Oklahoma facilities affected by this action.

- A pre-publication version of the Federal Register Notice is available and will be published in the Federal Register in 7 to 10 days. (268 pp, 1.8 MB, [About PDF](#))

Ellen Belk  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

POSITIONS OR VIEWS EXPRESSED DO NOT REPRESENT OFFICIAL EPA POLICY

**From:** Belk, Ellen  
**Sent:** Tuesday, December 16, 2014 10:18 AM  
**To:** 'Heller, Katherine B.'  
**Subject:** RE: info about the rule?

Hi Katherine,  
The proposed rule is scheduled to be in the Federal Register today.  
I will forward a copy to you as soon as I receive it.  
Thanks,  
Ellen

Ellen Belk  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

POSITIONS OR VIEWS EXPRESSED DO NOT REPRESENT OFFICIAL EPA POLICY

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]

**Sent:** Monday, December 15, 2014 10:14 AM

**To:** Belk, Ellen

**Cc:** Hanks, Katie P.

**Subject:** info about the rule?

Hi, Ellen,

In preparation for our conversation on Wednesday, Katie asked if I had any technical information about the rule that she could review, or a FR notice. Is there something you could send for her to review? Has it been published in FR?

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/16/2014 11:18:30 AM  
**Subject:** RE: info about the rule?

Wow, congratulations! We will look forward to receiving it.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, December 16, 2014 11:18 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: info about the rule?

Hi Katherine,  
The proposed rule is scheduled to be in the Federal Register today.  
I will forward a copy to you as soon as I receive it.  
Thanks,  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

POSITIONS OR VIEWS EXPRESSED DO NOT REPRESENT OFFICIAL EPA POLICY

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 15, 2014 10:14 AM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** info about the rule?

Hi, Ellen,  
In preparation for our conversation on Wednesday, Katie asked if I had any technical information about the rule that she could review, or a FR notice. Is there something you could send for her to review? Has it been published in FR?

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 12/15/2014 11:14:24 AM  
**Subject:** info about the rule?

Hi, Ellen,

In preparation for our conversation on Wednesday, Katie asked if I had any technical information about the rule that she could review, or a FR notice. Is there something you could send for her to review? Has it been published in FR?

Thanks,

**Katherine Heller**

Senior Economist

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/11/2014 11:48:46 AM  
**Subject:** FW: Comment processing overview  
**Attachments:** Process\_Handout.docx

Ellen,

This handout is a general description of our response to comments process for rules with a large number of comments. The basic concepts and activities would be the same for a smaller number of comments, although I'm not sure Katie would recommend using CHARM.

We look forward to discussing this with you on Wednesday.

Best,  
Kathy

---

**From:** Hanks, Katie P.  
**Sent:** Thursday, October 30, 2014 9:52 AM  
**To:** Heller, Katherine B.  
**Subject:** Comment processing overview

The attached document provides a summary of our comment processing practices using CHARM.

Katie Hanks  
RTI International  
3040 Cornwallis Road  
Research Triangle Park, NC 27709  
(919) 316-3732  
(919) 541-7155 (fax)

---

**From:** Hanks, Katie P.  
**To:** Belk, Ellen  
**Sent:** 12/11/2014 11:24:49 AM  
**Subject:** Accepted: FW: Response to Comments -- contract support

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 12/11/2014 10:55:06 AM  
**Subject:** RE: Response to Comments -- contract support

Katie's contact info is [kphanks@rti.org](mailto:kphanks@rti.org)

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, December 11, 2014 10:53 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: Response to Comments -- contract support

Thanks. If you send me Katie's email I can add her to the invite.

-----Original Appointment-----

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, December 11, 2014 9:41 AM  
**To:** Belk, Ellen  
**Subject:** Accepted: Response to Comments -- contract support  
**When:** Wednesday, December 17, 2014 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).  
**Where:** R6-ConfRm-PineTree-06O15

I will forward this to Katie Hanks, and forward the materials in a separate email. Thanks!

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/11/2014 10:40:40 AM  
**Subject:** Accepted: Response to Comments -- contract support

I will forward this to Katie Hanks, and forward the materials in a separate email. Thanks!

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/2/2014 9:10:05 AM  
**Subject:** RE: still want to discuss response to comments?

OK, thanks Ellen!

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, December 01, 2014 4:15 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: still want to discuss response to comments?

Thanks for remembering about this.  
Give me a chance to meet with JoLynn, and then I will get back to you, either way.  
Thanks!

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, December 01, 2014 3:10 PM  
**To:** Belk, Ellen  
**Cc:** Hanks, Katie P.  
**Subject:** still want to discuss response to comments?

Hi, Ellen-

Several weeks ago, you expressed an interest in talking with our engineers about possible support during response to public comments. The person best suited to discuss this with you is Katie Hanks. She is out of the office Tuesday and Wednesday of this week, but has availability Thursday afternoon and some of Friday also. Katie also has quite a few time slots available next week if that fits your schedule better.

If you are still interested in talking about this with us, let us know what times would work for you and your colleagues, and we will find a time that works.

Best regards,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Hanks, Katie P.  
**Sent:** 12/1/2014 4:10:07 PM  
**Subject:** still want to discuss response to comments?

Hi, Ellen-

Several weeks ago, you expressed an interest in talking with our engineers about possible support during response to public comments. The person best suited to discuss this with you is Katie Hanks. She is out of the office Tuesday and Wednesday of this week, but has availability Thursday afternoon and some of Friday also. Katie also has quite a few time slots available next week if that fits your schedule better.

If you are still interested in talking about this with us, let us know what times would work for you and your colleagues, and we will find a time that works.

Best regards,

**Katherine Heller**

Senior Economist

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Bullock, David; Depro, Brooks M.; Collins, JoLynn; Hanks, Katie P.  
**Sent:** 10/30/2014 11:31:40 AM  
**Subject:** RE: call to discuss Response to Comments support  
**Attachments:** Process\_Handout.docx

Ellen,

At present, it appears that Katie Hanks and David Bullock (and I) would be available almost any time during the first week of December to discuss possible response to comments support. Times between 10 a.m. and 4 p.m. EST would work best for us.

Katie provided the attached description of the software RTI uses to organize large response to comments efforts, for your review. This software is most useful for large RTC efforts, although the same process is followed for all RTC support assignments. The use of CHARM may not be needed for smaller response efforts (for example, fewer than 50 comments); those could be done in Word using the same process steps.

Please suggest some times that would be convenient for your team and we will identify the ones that work for us as well.

Thank you,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, October 27, 2014 4:08 PM  
**To:** Heller, Katherine B.  
**Cc:** Bullock, David; Depro, Brooks M.; Collins, JoLynn  
**Subject:** RE: call to discuss Response to Comments support

Kathy,  
If possible, we would like to set up a call to discuss Response to Comments support sometime during the first week of December.  
Thank you,  
Ellen

*Ellen Belk*

Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, October 23, 2014 10:37 AM  
**To:** Belk, Ellen  
**Cc:** Bullock, David; Depro, Brooks M.  
**Subject:** call to discuss Response to Comments support

Ellen,  
David Bullock will be your contact person for the discussion of response to comments support. We have some other folks who may also participate in the call: David Reeves and Katie Hanks. Both David Bullock and Katie are actively engaged in overseeing response to comments tasks at present, and David Reeves is their program director.



I quickly checked schedules, and we have several windows available next week and are quite open the first week of November. If you wish to have a call next week, our current windows are (all EDT):

Tuesday 10/28

11-12

1-2

Wednesday 10/29

9-11:30

12-2:30

Thursday 10/30

9 – 11

1-3

Friday 10/31

9-11

Please contact David and cc: me to discuss when you might want to schedule a call.

Thanks very much!

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Bullock, David; Depro, Brooks M.  
**Sent:** 10/23/2014 11:36:34 AM  
**Subject:** call to discuss Response to Comments support

Ellen,

David Bullock will be your contact person for the discussion of response to comments support. We have some other folks who may also participate in the call: David Reeves and Katie Hanks. Both David Bullock and Katie are actively engaged in overseeing response to comments tasks at present, and David Reeves is their program director.

I quickly checked schedules, and we have several windows available next week and are quite open the first week of November. If you wish to have a call next week, our current windows are (all EDT):

Tuesday 10/28

11-12

1-2

Wednesday 10/29

9-11:30

12-2:30

Thursday 10/30

9 – 11

1-3

Friday 10/31

9-11

Please contact David and cc: me to discuss when you might want to schedule a call.

Thanks very much!

**Katherine Heller**

Senior Economist

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 10/23/2014 8:53:49 AM  
**Subject:** Accepted: Texas Regional Haze Evaluation: WA 3-9

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 10/9/2014 3:47:06 PM  
**Subject:** Accepted: Texas Regional Haze Evaluation: Modeling Analysis

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 10/9/2014 1:19:37 PM  
**Subject:** RE: any comments or direction on WA 3-09?

Ellen,  
Thanks for the heads up. Shall I communicate with Phyllis and the folks at Environ that EPA will likely need some of their time during the Jan to April time frame for support in responding to comments?

We look forward to helping to facilitate their efforts.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, October 09, 2014 1:02 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: any comments or direction on WA 3-09?

Hi Katherine,

For Phyllis, we greatly appreciate her work thus far, and almost certainly will need her help in response to comments.

For Environ, we also are very appreciative of their work. We would like to meet with them in a couple of weeks for discussion. As I think you have seen, I sent a meeting invitation for a conference call the week after next. Going forward, we will almost certainly need Environ's help in response to comments as well.

As I think you know, the date for signature on the proposal is 26, 2014. We expect the comment period to be approximately 60 days following publication, so help with comments is likely to be needed sometime mid to late Jan to early to mid-April or so (most likely Feb and March?). I realize that is a rough timeline and we will have more information as we get closer.

Thanks,  
Ellen

*Ellen Belk*  
U.S. EPA Region 6  
Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, October 08, 2014 12:31 PM  
**To:** Belk, Ellen  
**Subject:** any comments or direction on WA 3-09?

Hi, Ellen-  
It has been a while since we have heard from you, and I hope things are going well.

We're preparing our monthly progress report for September. Both Ou and Phyllis asked if EPA had any comments or direction based on their deliverables. Ou is waiting to create the hard drive until she is sure that the data and models are final.

Please let us know if you need anything further on either Task 2 or Task 3.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 10/8/2014 1:30:54 PM  
**Subject:** any comments or direction on WA 3-09?

Hi, Ellen-

It has been a while since we have heard from you, and I hope things are going well.

We're preparing our monthly progress report for September. Both Ou and Phyllis asked if EPA had any comments or direction based on their deliverables. Ou is waiting to create the hard drive until she is sure that the data and models are final.

Please let us know if you need anything further on either Task 2 or Task 3.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 8/12/2014 4:38:57 PM  
**Subject:** any comments on Environ deliverable?

Ellen,

Ou contacted me to check and see if you had any questions or comments on their deliverable sent to you a couple of weeks ago. If so, please let both her and us know.

Thanks!

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 8/4/2014 3:34:07 PM  
**Subject:** Accepted: TX RH: non-CBI data and analyses @ Mon Aug 4, 2014 12:30pm - 1pm (Phyllis Fox)  
**Attachments:** invite.ics

**Phyllis Fox has accepted this invitation.**

**TX RH: non-CBI data and analyses**

**Ex. 6 - Personal Privacy**

**When** Mon Aug 4, 2014 12:30pm – 1pm Pacific Time

**Where** R6-ConfRm-PineTree-06O15 ([map](#))

**Calendar** Phyllis Fox

**Who**

- Belk, Ellen - organizer
- Phyllis Fox - creator
- Kordzi, Joe
- R6-ConfRm-PineTree-06O15
- Katherine B. Heller (kbh@rti.org)

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account belk.ellen@epa.gov because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 8/4/2014 2:57:56 PM  
**Subject:** Declined: TX RH: non-CBI data and analyses

Ellen,

I have a conflict during the timeframe of the call. If I get free, I'll call in. Please proceed with the call in my absence, and thank you for including me in the invitation.

Kathy

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 7/21/2014 3:59:02 PM  
**Subject:** response to your questions

Hi, Ellen-

I am perfectly happy with the portal idea; I was going to suggest using our public FTP site, but this is great. I haven't followed through with getting access, but I think it is a great solution.

I also agree that email traffic could just cc me to make sure RTI is in the communications loop with Dr. Fox. And for technical telephone calls, Dr. Fox or EPA can just send me an email reporting that the call will take place or has taken place.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Freeman, Carla S.; Depro, Brooks M.; LeDoux, Erica  
**Sent:** 7/14/2014 10:53:00 AM  
**Subject:** RE: Region 6 CBI Document Control Officer

Ellen,

Thank you very much, we'll proceed to request WA-specific clearances for RTI staff, and then request one for Dr. Fox when she has obtained contract-level clearance.

Best,  
 Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, July 14, 2014 10:51 AM  
**To:** Heller, Katherine B.  
**Cc:** Freeman, Carla S.; Depro, Brooks M.; LeDoux, Erica  
**Subject:** RE: Region 6 CBI Document Control Officer

Hi Katherine,  
 Yes, the Document Control Officer is Erica LeDoux.  
 Please see Erica's contact information below.  
 Thank you,  
 Ellen

*Ellen Belk*

Environmental Engineer  
 U.S. Environmental Protection Agency, Region 6  
 Multi-media Planning and Permitting Division  
 Air Planning Section, 6PD-L  
 1445 Ross Avenue  
 Dallas Texas 75202  
 Tel: 214-665-2164  
 Fax: 214-665-7263  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

Erica G. LeDoux, Environmental Engineer  
 U.S. EPA Region 6  
 Air Permits Section (6PD-R)  
 1445 Ross Ave.  
 Dallas, TX 75202  
 Office: (214) 665-7265  
 Fax: (214) 665-6762  
[ledoux.eric@epa.gov](mailto:ledoux.eric@epa.gov)

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, July 10, 2014 11:06 AM  
**To:** Belk, Ellen  
**Cc:** Freeman, Carla S.; Depro, Brooks M.  
**Subject:** Region 6 CBI Document Control Officer

Hi, Ellen-

We are preparing a request for WA-specific CBI clearance under WA 3-09. Although you, as WAM, will be the person

to approve the request, the request will be sent to your CBI manager or document control officer. Could you provide contact information for that person?

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**CC:** Katherine B. Heller (kbh@rti.org)  
**Sent:** 7/10/2014 4:26:58 PM  
**Subject:** Re: Dr. Fox's address?

Ex. 6 - Personal Privacy

On Jul 10, 2014, at 10:17 PM, "Belk, Ellen" <Belk.Ellen@epa.gov> wrote:

Dr. Fox,  
What is your address for mailing?  
Thank you,  
Ellen

Katherine – if you know Dr. Fox's address in Ex. 6 - Personal Privacy would you please provide it? Thanks!

**From:** Belk, Ellen  
**Sent:** Wednesday, July 09, 2014 3:45 PM  
**To:** Phyllis Fox  
**Cc:** Katherine B. Heller (kbh@rti.org)  
**Subject:** Transmittal of additional non-CBI information

Dr. Fox,

Joe has some additional information he would like to transmit to you by CD due to its size. It is in 2 CDs. This information was included in the responses we received to our 114 letters and was not claimed as CBI. We would email it but it's too big (> 1 gigabyte). How should we send this to you, and where, and when can it arrive? By overnight carrier?

Katherine,

We will send a copy of the same material to you as well. Please let me know the best address for you.

Thank you very much,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Freeman, Carla S.; Depro, Brooks M.  
**Sent:** 7/10/2014 12:05:58 PM  
**Subject:** Region 6 CBI Document Control Officer

Hi, Ellen-

We are preparing a request for WA-specific CBI clearance under WA 3-09. Although you, as WAM, will be the person to approve the request, the request will be sent to your CBI manager or document control officer. Could you provide contact information for that person?

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen; Phyllis Fox  
**Sent:** 7/10/2014 7:46:12 AM  
**Subject:** RE: Transmittal of additional non-CBI information

Please feel free to just mail mine (or whatever is cheapest).

Mail address:

Katherine Heller, Bldg O9 489  
RTI International  
P.O. Box 12194  
Research Triangle Park, NC 27709

Street address:

Katherine Heller, Bldg O9 489  
RTI International  
3040 East Cornwallis Rd  
Research Triangle Park, NC 27709

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, July 09, 2014 4:57 PM  
**To:** Phyllis Fox  
**Cc:** Heller, Katherine B.  
**Subject:** Transmittal of additional non-CBI information

Dr. Fox,

Joe has some additional information he would like to transmit to you by CD due to its size. It is in 2 CDs. This information was included in the responses we received to our 114 letters and was not claimed as CBI. We would email it but it's too big (> 1 gigabyte). How should we send this to you, and where, and when can it arrive? By overnight carrier?

Katherine,

We will send a copy of the same material to you as well. Please let me know the best address for you.

Thank you very much,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)



---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 7/9/2014 4:57:13 PM  
**Subject:** Automatic reply: Transmittal of additional non-CBI information

I will be out of the office Wednesday afternoon, returning Thursday morning. I will respond to your email as soon as I can.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 7/8/2014 9:21:36 AM  
**Subject:** Accepted: Task 3

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 7/8/2014 8:58:50 AM  
**Subject:** Re: Task 3

Thanks

On Tuesday, July 8, 2014, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:  
Rescheduling as requested.

---

**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 7/8/2014 8:58:12 AM  
**Subject:** Accepted: Task 3 @ Tue Jul 8, 2014 6:30am - 7am (Phyllis Fox)  
**Attachments:** invite.ics

**Phyllis Fox has accepted this invitation.**

### **Task 3**

Rescheduling as requested.

**When** Tue Jul 8, 2014 6:30am – 7am Pacific Time  
**Where** R6-ConfRm-CypressTree-06O02@epa.gov ([map](#))  
**Calendar** Phyllis Fox  
**Who**

- Belk, Ellen - organizer
- Phyllis Fox - creator
- Kordzi, Joe
- Katherine B. Heller (kbh@rti.org)
- R6-ConfRm-CypressTree-06O02@epa.gov

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account belk.ellen@epa.gov because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

---

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 7/7/2014 6:15:46 PM  
**Subject:** call time?

Just to confirm, the call tomorrow is at 11:30 AM PACIFIC? It shows up as 8:30 AM Pacific on my Google calendar.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** PhyllisFox@gmail.com  
**Sent:** 7/7/2014 10:45:42 AM  
**Subject:** Dr. Fox's contract is in place

Ellen,  
I am happy to say, we are finally ready to go on Task 3.

Thanks to both of you for your patience!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen; PhyllisFox@gmail.com  
**Sent:** 7/2/2014 11:20:42 AM  
**Subject:** expect consulting agreement to go out today

Good morning,

I have been working with our consultant office, and I believe they will be able to get the consulting agreement out to Dr. Fox today. Finally. As soon as it is signed, Dr. Fox can start work. Again, I apologize for the delays.

Please let me know if you have any questions or concerns.

Best,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 7/1/2014 1:30:49 PM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-

The consulting agreement has been approved by our contracts office and moved from our contracts office to the consultant office. I will keep track of progress there. I do not expect it to take very long to get out to Dr. Fox. Hopefully, she will receive it by tomorrow.

I'll let you know when it is sent.

Best,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, June 30, 2014 5:27 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Has there been any progress?  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 11:52 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-

Our contracts officer states that she will finish drafting it today or tomorrow (she's working the weekend to catch up), and it then goes to the consultants office, and then out to Dr. Fox. I will check with the consultants office and see if they have a backlog, and urge them to get it out to Dr. Fox as quickly as possible. As soon as Dr. Fox signs it, she can begin work.

Again, I apologize for the delay.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 12:04 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Thank you for checking.  
When the consulting agreement goes out, will that be the last step?  
Thanks!  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 10:57 AM  
**To:** Belk, Ellen



**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-

Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]

**Sent:** Friday, June 27, 2014 11:55 AM

**To:** Heller, Katherine B.

**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,

Do we have a green light to move forward on Task 3 for the cost analysis?

I was out of the office earlier this week and am working through my messages.

Thank you,

Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Depro, Brooks M.  
**Sent:** 6/27/2014 12:51:39 PM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-

Our contracts officer states that she will finish drafting it today or tomorrow (she's working the weekend to catch up), and it then goes to the consultants office, and then out to Dr. Fox. I will check with the consultants office and see if they have a backlog, and urge them to get it out to Dr. Fox as quickly as possible. As soon as Dr. Fox signs it, she can begin work.

Again, I apologize for the delay.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 12:04 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
 Thank you for checking.  
 When the consulting agreement goes out, will that be the last step?  
 Thanks!  
 Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 10:57 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
 Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 11:55 AM  
**To:** Heller, Katherine B.  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,  
 Do we have a green light to move forward on Task 3 for the cost analysis?  
 I was out of the office earlier this week and am working through my messages.  
 Thank you,  
 Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
 214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/27/2014 11:56:42 AM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-

Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 11:55 AM  
**To:** Heller, Katherine B.  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,

Do we have a green light to move forward on Task 3 for the cost analysis?

I was out of the office earlier this week and am working through my messages.

Thank you,

Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/20/2014 3:21:44 PM  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Ellen,  
See below-Environ is working diligently. Our consultant office contact is out of the office today. I will check with her first thing Monday on Dr. Fox's contract.

Hope you have a good weekend!

Best,  
Kathy

---

**From:** Uarporn Nopmongcol [<mailto:unopmongcol@environcorp.com>]  
**Sent:** Friday, June 20, 2014 1:45 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Hi Kathy,

Yep, we got back on it right away and are going full speed on this. At the current rate, we don't expect much delay if at all.  
Thanks,  
Ou

---

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Friday, June 20, 2014 10:23 AM  
**To:** Uarporn Nopmongcol  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Hi, Ou-  
Ellen sent notice below that the extension has been granted. However, she stressed that they need your results to make a determination how to proceed, so please keep working as fast as you can. I hope you've been able to get back to work since we received work plan approval. Please let me know if that is not the case, and also if there is anything you need from me to facilitate matters.

And have a good weekend!  
Thanks,  
Kathy

---

**From:** Heller, Katherine B.  
**Sent:** Thursday, June 19, 2014 11:57 AM  
**To:** 'Belk, Ellen'  
**Cc:** Collins, JoLynn  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Ellen,  
Thank you for letting us know. A relief, obviously. Now that we have WPA, we'll just move forward with the work as expeditiously as possible.

Thanks-Kathy

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]

**Sent:** Thursday, June 19, 2014 11:56 AM  
**To:** Heller, Katherine B.  
**Cc:** Collins, JoLynn  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Katherine,

The court has granted new dates for our proposed rulemaking and final rulemaking as follows:

**Proposed rulemaking by November 26, 2014**

**Final rulemaking by September 4, 2015.**

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**U.S. District Court**

**District of Columbia**

### **Notice of Electronic Filing**

The following transaction was entered on 6/10/2014 at 5:02 PM and filed on 6/10/2014

**Case Name:** NATIONAL PARKS CONSERVATION ASSOCIATION et al v. UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY et al

**Case Number:** 1:11-cv-01548-ABJ

**Filer:**

**Document**  
**Number:** No document attached

### **Docket Text:**

**MINUTE ORDER granting [82] Unopposed Motion to Amend Partial Consent Decree. The deadlines applicable to Texas and Oklahoma in Paragraphs 3 and 4 and Table A of the Consent Decree are modified to provide that EPA must sign the required notices of proposed rulemaking by November 26, 2014, and must sign the required notices of final rulemaking by September 4, 2015. The parties shall confer by telephone regarding the progress in the required rulemakings during the week of June 16, 2014, and at 60-day intervals thereafter until the required notices of final rulemaking applicable to Texas and Oklahoma have been signed. The calls will be scheduled for a mutually convenient time by counsel for EPA. Signed by Judge Amy Berman Jackson on 6/10/2014. (lcabj3)**

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/19/2014 12:03:20 PM  
**Subject:** RE: Work Plan has been approved

Yes, I will alert you as soon as it is in place. Thanks!

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, June 19, 2014 12:03 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Plan has been approved

If you would, please let us know when as soon as we can proceed.  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, June 19, 2014 10:54 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Plan has been approved

Yes ma'am, we've initiated the consulting agreement, and I expect it to be in place by Monday at the latest.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, June 19, 2014 10:47 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Plan has been approved

Are we able to proceed with Task 3 with Dr. Fox as well?

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 18, 2014 9:19 AM  
**To:** Belk, Ellen  
**Cc:** Uarporn Nopmongcol (unopmongcol@environcorp.com)  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Collins, JoLynn  
**Sent:** 6/19/2014 11:57:29 AM  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Ellen,  
Thank you for letting us know. A relief, obviously. Now that we have WPA, we'll just move forward with the work as expeditiously as possible.

Thanks-Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, June 19, 2014 11:56 AM  
**To:** Heller, Katherine B.  
**Cc:** Collins, JoLynn  
**Subject:** FW: Regional Haze - motion extending deadlines granted

**Katherine,**

**The court has granted new dates for our proposed rulemaking and final rulemaking as follows:**

**Proposed rulemaking by November 26, 2014**

**Final rulemaking by September 4, 2015.**

Ellen Belk  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**U.S. District Court**

**District of Columbia**

### **Notice of Electronic Filing**

The following transaction was entered on 6/10/2014 at 5:02 PM and filed on 6/10/2014

**Case Name:** NATIONAL PARKS CONSERVATION ASSOCIATION et al v. UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY et al  
**Case Number:** 1:11-cv-01548-ABJ  
**Filer:**  
**Document**  
**Number:** No document attached

**Docket Text:**  
**MINUTE ORDER granting [82] Unopposed Motion to Amend Partial Consent Decree. The deadlines**



applicable to Texas and Oklahoma in Paragraphs 3 and 4 and Table A of the Consent Decree are modified to provide that EPA must sign the required notices of proposed rulemaking by November 26, 2014, and must sign the required notices of final rulemaking by September 4, 2015. The parties shall confer by telephone regarding the progress in the required rulemakings during the week of June 16, 2014, and at 60-day intervals thereafter until the required notices of final rulemaking applicable to Texas and Oklahoma have been signed. The calls will be scheduled for a mutually convenient time by counsel for EPA. Signed by Judge Amy Berman Jackson on 6/10/2014. (lcabj3)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/19/2014 11:53:47 AM  
**Subject:** RE: Work Plan has been approved

Yes ma'am, we've initiated the consulting agreement, and I expect it to be in place by Monday at the latest.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, June 19, 2014 10:47 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Plan has been approved

Are we able to proceed with Task 3 with Dr. Fox as well?

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 18, 2014 9:19 AM  
**To:** Belk, Ellen  
**Cc:** Uarporn Nopmongcol (unopmongcol@environcorp.com)  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Uarporn Nopmongcol  
**To:** Heller, Katherine B.; Belk, Ellen  
**Sent:** 6/18/2014 11:44:47 AM  
**Subject:** RE: Work Plan has been approved

Noted.

Thanks,  
Ou

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 18, 2014 7:19 AM  
**To:** Belk, Ellen (Belk.Ellen@epa.gov)  
**Cc:** Uarporn Nopmongcol  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Uarporn Nopmongcol (unopmongcol@environcorp.com)  
**Sent:** 6/18/2014 10:18:46 AM  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Phyllis Fox  
**To:** Heller, Katherine B.; Belk, Ellen  
**Sent:** 6/17/2014 8:09:24 PM  
**Subject:** Fwd: FW: Region 9 issue

More info on prior arrangements to vu CBI at Region 9

----- Forwarded message -----

**From:** Van Houtven, George L. <gvh@rti.org>  
**Date:** Tue, Sep 14, 2010 at 11:38 AM  
**Subject:** FW: Region 9 issue  
**To:** Ex. 6 - Personal Privacy

Hi Phyllis – Here is the response I received about the CBIO. It looks like my original interpretation of the EPA/OAQPS/CAA CBI PROCEDURES was the correct one. Let me know if you have any questions.

Thanks.

George

---

**From:** Swecker, Carla H.  
**Sent:** Tuesday, September 14, 2010 2:26 PM  
**To:** Van Houtven, George L.  
**Cc:** Scruggs, Lisa; Swecker, Carla H.  
**Subject:** RE: Region 9 issue

CBIO - CBI Office. The office at which she is accessing data, Region 9. If she creates the Non-CBI version of the report, and plans to call the EPA to relay the CBI data, then she would need to document the conversation for the record and give the form to the EPA DCO for log-in. If she does call EPA to relay the information, she should follow the guidelines below, and not use a speaker phone or allow unauthorized person to overhear on her end of the phone.

Please let me know if you have any additional questions.

Carla

---

**From:** Van Houtven, George L.  
**Sent:** Tuesday, September 14, 2010 1:53 PM  
**To:** Swecker, Carla H.  
**Subject:** RE:

Thanks. Who is the CBIO?

---

**From:** Swecker, Carla H.  
**Sent:** Tuesday, September 14, 2010 12:29 PM  
**To:** Van Houtven, George L.  
**Cc:** Scruggs, Lisa; Swecker, Carla H.  
**Subject:**

George, Per our conversation, below is the excerpt from the EPA CAA CBI manual, Jan 2009. I've attached the Memorandum of CAA CBI telephone conversation form. Please let me know if you have any questions.

Pages 27 & 28 of the OAQPS, CBI SECURITY MANUAL, January 2009

CBI materials are transferred ONLY through CBI offices or DCOs.

**3. DOCUMENT CONTROL.** In order to minimize the exposure of CAA CBI materials to inadvertent disclosure, the following document control steps should be taken:

**a. Telephone Calls.** Federal and contractor employees with CAA CBI access may discuss CAA CBI on the telephone with other individuals who are authorized access to the specific CBI or authorized individuals of providing organizations. However, caution must be used because interception of telephone communications is an easy means by which unauthorized persons may obtain CBI.

When making or receiving telephone calls in which CBI will be discussed, the following safeguards should be abided by:

- Verify the identity and CBI access status of the person with whom they are speaking.
- Inform the person that the telephone lines are not secure.
- Assure the person that a telephone discussion of CAA CBI with a Federal or contractor employee does not constitute a waiver of any claim of confidentiality.
- Inform the person that any information provided in the telephone conversation claimed as confidential will be properly safeguarded.

**It is the responsibility of the user to ensure that all appropriate measures have been taken to protect CAA CBI from disclosure to unauthorized individuals.**

Federal and contractor employees shall complete the Memorandum of CAA CBI Telephone Conversation, CAA CBI

Form 6 (Appendix B) for all telephone calls in which

CAA CBI is discussed. Telephone memorandums must be submitted to the CBIO upon completion of the call so they can be added to the record.

***Carla Swecker, Assistant FSO***

Industrial Security Office

RTI International

phone 919 541.6755

fax 919 541.6858

mailto:chs@rti.org

Get Your Special Signature at Xrosmate.

---

**From:** Phyllis Fox  
**To:** Heller, Katherine B.; Belk, Ellen  
**Sent:** 6/17/2014 8:07:32 PM  
**Subject:** Fwd: CBI access for RTI International (contract EP-D-06-003, RTI Project 0209897)  
**Attachments:** How to UNZIP.html; removed.txt

Region 9 CBI contact and prior arrangements to view CBI at Region 9.

----- Forwarded message -----

From: **Swecker, Carla H.** <[chs@rti.org](mailto:chs@rti.org)>  
Date: Mon, Aug 9, 2010 at 11:49 AM  
Subject: CBI access for RTI International (contract EP-D-06-003, RTI Project 0209897)  
To: **Ex. 6 - Personal Privacy**  
Cc: "Swecker, Carla H." <[chs@rti.org](mailto:chs@rti.org)>

Contract No. EP-D-06-003

RTI Project No. 0209897.004.085

RTI Work Assignment Leader: Paul Peterson

RTI PM: George Van Houtven

Hello Dr. Fox,

Paul Peterson, RTI WA Leader for the above CBI project has indicated that you will be supporting the project, and therefore will require a Confidential Business Information (CBI) clearance. I am the contractor document control officer (DCO) at RTI for the CBI program.

In accordance with the EPA CBI program you are required to be CBI briefed, take a test and sign a CBI access agreement **before** you can have access to CBI. I am attaching a PDF that provides an overview of the RTI CBI program, and although you will not be accessing CBI data here, the information contained in the PDF is important for you to be aware of as a CBI-cleared consultant for RTI.

Please complete the following as soon as possible: view the attached PDF, take the True/False Quiz and sign the access agreement in Section III (highlighted in yellow). You may scan the test, and access agreement and return it to me via email, or you may fax it to 919-541-6857 or mail it to the address below.

Some key points from the PDF are:

- Access to CBI data is based upon need to know, by contract and specific work assignment.
- Knowledge of CBI cannot be shared with persons that are not authorized access.



- CBI is accessed in a controlled environment and must be kept in your possession at all times until relinquished to the DCO and secured in an authorized storage container.
- All CBI data is accountable. If you need to create CBI notes or a report containing CBI, please consult with the DCO for guidance; however, Paul indicates that you will only be viewing CBI information.
- An information system designated for CBI work has **not** been approved for this contract; therefore CBI data, notes or reports should not be created using your personal computer or laptop.

My understanding is that you plan to access CBI data at the EPA Region 9 office location in San Francisco. The POC is Ms. Ceciley Wilder, DCO, phone: 415-947-4143. I will notify Ms. Wilder upon your completion of the CBI briefing process so that she may allow you access to the CBI data as necessary.

Please feel free to contact me with any questions concerning the attached documents or your access to the Region 9 EPA Office.

Regards,

*Carla Swecker, Assistant FSO*

*Contractor Document Control Officer*

Industrial Security Office  
RTI International  
3040 Cornwallis Road

Hanes Bldg. 105

Research Triangle Park, NC 27709

phone 919 541.6755

fax 919 541.6858

mailto:chs@rti.org

Get Your Special Signature at Xrosmate

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**From:** Heller, Katherine B.  
**To:** Phyllis Fox  
**CC:** Belk, Ellen; Collins, JoLynn; Depro, Brooks M.  
**Sent:** 6/17/2014 11:34:18 AM  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

Well, let's try and then we can reschedule for a time when you aren't on a mountain if it doesn't work.

---

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Tuesday, June 17, 2014 11:30 AM  
**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen; Collins, Jolynn (Collins.Jolynn@epa.gov); Depro, Brooks M.  
**Subject:** Re: LOE Estimate Constrained to 189 Hrs

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Phyllis and Ellen,

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[Ex. 6 - Personal Privacy](#) I will open the line a minute or so before noon my time.

If this time does not work for you, please suggest an alternative. I have no set appointments for the next few days.

JoLynn and Brooks, I'm including you so you are "in the loop" but do not feel you need to participate in the call.

Thanks,  
Kathy

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**Sent:** Monday, June 16, 2014 4:17 PM  
**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen; Collins, Jolynn (Collins.Jolynn@epa.gov); Depro, Brooks M.  
**Subject:** Re: LOE Estimate Constrained to 189 Hrs

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On the R9 question, I have checked with RTI's contract program manager and RTI will require that Dr. Fox be cleared and then work with CBI materials at RTI.

Thanks,  
Katherine

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**Sent:** Monday, June 16, 2014 2:10 PM

**To:** Heller, Katherine B.  
**Cc:** [Ex. 6 - Personal Privacy] Collins, JoLynn  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

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**Sent:** Monday, June 16, 2014 12:08 PM  
**To:** Belk, Ellen  
**Cc:** [Ex. 6 - Personal Privacy] Collins, JoLynn  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

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Thanks, Kathy

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**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, June 16, 2014 1:05 PM  
**To:** Heller, Katherine B.  
**Cc:** [Ex. 6 - Personal Privacy] Collins, JoLynn  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

Katherine,  
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Thank you,  
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**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, June 16, 2014 10:57 AM  
**To:** Belk, Ellen  
**Cc:** [Ex. 6 - Personal Privacy]  
**Subject:** FW: LOE Estimate Constrained to 189 Hrs

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**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Sunday, June 15, 2014 12:57 PM  
**To:** Heller, Katherine B.  
**Subject:** LOE Estimate Constrained to 189 Hrs

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**From:** Phyllis Fox  
**To:** Heller, Katherine B.  
**CC:** Belk, Ellen; Collins, JoLynn; Depro, Brooks M.  
**Sent:** 6/17/2014 11:29:47 AM  
**Subject:** Re: LOE Estimate Constrained to 189 Hrs

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JoLynn and Brooks, I'm including you so you are "in the loop" but do not feel you need to participate in the call.

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**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen; Collins, JoLynn ([Collins.Jolynn@epa.gov](mailto:Collins.Jolynn@epa.gov)); Depro, Brooks M.  
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**Cc:** Ex. 6 - Personal Privacy Collins, JoLynn  
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**To:** Belk, Ellen  
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**Subject:** RE: LOE Estimate Constrained to 189 Hrs

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Thank you,  
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**Sent:** Monday, June 16, 2014 10:57 AM  
**To:** Belk, Ellen  
**Cc:** [Ex. 6 - Personal Privacy]  
**Subject:** FW: LOE Estimate Constrained to 189 Hrs

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**Sent:** Sunday, June 15, 2014 12:57 PM  
**To:** Heller, Katherine B.  
**Subject:** LOE Estimate Constrained to 189 Hrs

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**From:** Heller, Katherine B.  
**To:** Phyllis Fox  
**CC:** Belk, Ellen; Collins, JoLynn; Depro, Brooks M.  
**Sent:** 6/17/2014 10:53:34 AM  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

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**Sent:** Monday, June 16, 2014 4:17 PM  
**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen; Collins, JoLynn (Collins.JoLynn@epa.gov); Depro, Brooks M.  
**Subject:** Re: LOE Estimate Constrained to 189 Hrs

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**To:** Heller, Katherine B.  
**CC:** Belk, Ellen; Collins, JoLynn; Depro, Brooks M.  
**Sent:** 6/16/2014 4:16:35 PM  
**Subject:** Re: LOE Estimate Constrained to 189 Hrs

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**Sent:** 6/16/2014 3:25:18 PM  
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Please note that, of her original contracted hours, she had 236 remaining at the beginning of this contract period, or 47 beyond the 189 in the work plan/cost estimate.

After you review the attached and the email below, we'd like to schedule a call. At present, I have only a couple of meetings this week, so I'm very flexible. Dr. Fox is currently in Spain, which is 6 hours ahead of the east coast, 7 hours ahead of you.

Please let us know what time would work for you to meet; probably before 2 pm your time would be preferable for Dr. Fox, although she expresses willingness to meet late in the evening if that is necessary.

After we finalize her SOW, based on your priorities, we can submit a revised cost estimate increasing the LOE we estimate for her under task 3 if necessary.

Note that we have not yet received WP approval for this (and several other) WA s. We'll let you know asap when it comes through.

Thanks,  
Kathy

**From:** Phyllis Fox [[mailto:](#) [Ex. 6 - Personal Privacy](#)]

**Sent:** Sunday, June 15, 2014 12:57 PM

**To:** Heller, Katherine B.

**Subject:** LOE Estimate Constrained to 189 Hrs

Attached.

It's impossible to accurately estimate the increase in cost to review the CBI material, as I do not know the number of pages involved, the complexity of the information, nor the amount of it that I would have to integrate into the LOE attached. As a starting point, I would estimated a minimum of 5 days (2 travel from the west coast, 3 on-site) plus air fare and local accommodations. So, roughly [Ex. 6 - Personal Privacy](#) perhaps more depending upon volume of material and the amount of it that would be incorporated into our work. Timing is potentially an issue for the CBI as I will not be back in the U.S. until July 12.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Ex. 6 - Personal Privacy Collins, JoLynn  
**Sent:** 6/16/2014 1:07:45 PM  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

I will have to check with our CBI folks, have them talk to R9, etc. Obviously, that would save some travel time and expense, if their facilities are acceptable. I'll look into it.

Thanks, Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, June 16, 2014 1:05 PM  
**To:** Heller, Katherine B.  
**Cc:** Ex. 6 - Personal Privacy Collins, JoLynn  
**Subject:** RE: LOE Estimate Constrained to 189 Hrs

Katherine,  
I am in the process of reviewing the information provided.

A question I have is about the CBI. Would it be possible for Dr. Fox to access the CBI at EPA's Region 9 facility? This arrangement had worked previously.

Thank you,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, June 16, 2014 10:57 AM  
**To:** Belk, Ellen  
**Cc:** Ex. 6 - Personal Privacy  
**Subject:** FW: LOE Estimate Constrained to 189 Hrs

Ellen,  
At present we have 189 hours in our cost estimate for Dr. Fox, which reflects our estimate of her non-CBI work. I asked her to allocate the hours across the tasks and specify what she would be doing under each task and how many hours these activities would take. The attached document is her allocation and set of assumptions. In her email below, she talks about what would be required to review the CBI at our offices.

Please note that, of her original contracted hours, she had 236 remaining at the beginning of this contract period, or 47 beyond the 189 in the work plan/cost estimate.

After you review the attached and the email below, we'd like to schedule a call. At present, I have only a couple of meetings this week, so I'm very flexible. Dr. Fox is currently in Spain, which is 6 hours ahead of the east coast, 7 hours ahead of you.

Please let us know what time would work for you to meet; probably before 2 pm your time would be preferable for Dr. Fox, although she expresses willingness to meet late in the evening if that is necessary.

After we finalize her SOW, based on your priorities, we can submit a revised cost estimate increasing the LOE we estimate for her under task 3 if necessary.

Note that we have not yet received WP approval for this (and several other) WA s. We'll let you know asap when it comes through.

Thanks,



Kathy

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Sunday, June 15, 2014 12:57 PM  
**To:** Heller, Katherine B.  
**Subject:** LOE Estimate Constrained to 189 Hrs

Attached.

It's impossible to accurately estimate the increase in cost to review the CBI material, as I do not know the number of pages involved, the complexity of the information, nor the amount of it that I would have to integrate into the LOE attached. As a starting point, I would estimated a minimum of 5 days (2 travel from the west coast, 3 on-site) plus air fare and local accommodations. So, roughly [Ex. 6 - Personal Privacy](#) perhaps more depending upon volume of material and the amount of it that would be incorporated into our work. Timing is potentially an issue for the CBI as I will not be back in the U.S. until July 12.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Ex. 6 - Personal Privacy  
**Sent:** 6/16/2014 11:56:58 AM  
**Subject:** FW: LOE Estimate Constrained to 189 Hrs  
**Attachments:** LOE Estimate 6-14-14.docx

Ellen,

At present we have Ex. 4 - CBI in our cost estimate for Dr. Fox, which reflects our estimate of her non-CBI work. I asked her to allocate the hours across the tasks and specify what she would be doing under each task and how many hours these activities would take. The attached document is her allocation and set of assumptions. In her email below, she talks about what would be required to review the CBI at our offices.

Please note that, of her original contracted hours, she had Ex. 4 - CBI remaining at the beginning of this contract period, or Ex. 4 - CBI beyond the Ex. 4 - CBI in the work plan/cost estimate.

After you review the attached and the email below, we'd like to schedule a call. At present, I have only a couple of meetings this week, so I'm very flexible. Dr. Fox is currently in Spain, which is 6 hours ahead of the east coast, 7 hours ahead of you.

Please let us know what time would work for you to meet; probably before 2 pm your time would be preferable for Dr. Fox, although she expresses willingness to meet late in the evening if that is necessary.

After we finalize her SOW, based on your priorities, we can submit a revised cost estimate increasing the LOE we estimate for her under task 3 if necessary.

Note that we have not yet received WP approval for this (and several other) WA s. We'll let you know asap when it comes through.

Thanks,  
 Kathy

**From:** Phyllis Fox [mailto:Ex. 6 - Personal Privacy]  
**Sent:** Sunday, June 15, 2014 12:57 PM  
**To:** Heller, Katherine B.  
**Subject:** LOE Estimate Constrained to 189 Hrs

Attached.

It's impossible to accurately estimate the increase in cost to review the CBI material, as I do not know the number of pages involved, the complexity of the information, nor the amount of it that I would have to integrate into the LOE attached. As a starting point, I would estimated a minimum of 5 days (2 travel from the west coast, 3 on-site) plus air fare and local accommodations. So, roughly Ex. 6 - Personal Privacy perhaps more depending upon volume of material and the amount of it that would be incorporated into our work. Timing is potentially an issue for the CBI as I will not be back in the U.S. until July 12.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Ex. 6 - Personal Privacy Depro, Brooks M.  
**Sent:** 6/12/2014 3:05:14 PM  
**Subject:** available to discuss scope of work on Task 3?

Hi, Ellen-

Dr. Fox and I talked about her scope of work, and what exactly would be involved in the CBI portion of it. We would like to discuss that with you. She also has some concern about the open-ended nature of the task descriptions under subtask 3 (comment response) and subtask 4 (general control cost and performance capability support). I had asked her to estimate the level of effort to complete the tasks remaining under the SOW, but she is uncertain, not knowing the scope of the CBI effort and these two subtasks.

Would you be available to talk with me and Dr. Fox either tomorrow (any time but 12-1 EDT) or Monday? We need clarification before we can move forward.

Thank you,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/10/2014 3:55:44 PM  
**Subject:** Tentative: Texas Regional Haze Evaluation

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/9/2014 2:17:26 PM  
**Subject:** Accepted: Follow up

---

**From:** Heller, Katherine B.  
**To:** Ex. 6 - Personal Privacy  
**CC:** Depro, Brooks M.; Belk, Ellen  
**Sent:** 6/4/2014 8:18:55 PM  
**Subject:** revised SOW for consulting agreement  
**Attachments:** COI\_form\_Fox\_3-09.doc; Limitation of Future Contracting.pdf; SOW Dr. Fox, WA 3-09rev.docx

Hi, Dr. Fox,

We are hereby sending you a revised statement of work; revisions are highlighted. The major change is to exclude any aspects of the Task 3 work that would require accessing CBI. We are also attaching a COI form (please resubmit with current date), and the LOFC clause. Please note that you previously signed this clause as part of the 0212979.001.011 consulting agreement paperwork.

Please provide an estimate of level of effort for work described in the revised SOW. When we receive the signed documents and the LOE estimate, we will issue a consulting agreement for this work. Once the consulting agreement has been finalized, RTI will notify you that you may begin work.

We look forward to getting this in place as soon as possible.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Depro, Brooks M.  
**Sent:** 6/4/2014 12:30:45 PM  
**Subject:** RE: working with Dr. Fox

Hi, Ellen-

As you know we are approaching the 6/9 stop work date if WPA is not received. This would stop Environ, which we would like to avoid, so we are hoping to get a revised cost estimate in to EPA asap.

We are developing a revised SOW for Dr Fox that excludes any work with CBI. I would like to discuss the specifics with you if you have time. Let me know what time would work for a call.

Thanks,  
 Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, June 04, 2014 9:37 AM  
**To:** Heller, Katherine B.  
**Cc:** Collins, JoLynn; Phyllis Fox; Kordzi, Joe  
**Subject:** working with Dr. Fox

Hi Katherine,

I appreciate your keeping us informed of your progress.

Yes, we will of course continue to include you in any communication with Dr. Fox, including telephone calls and email messages.

Please let us know when a consulting agreement is in place so that work can continue on the Task 3 analyses.

Thank you very much.

Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
 214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, June 02, 2014 11:51 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.; Kordzi, Joe; Ex. 6 - Personal Privacy  
**Subject:** working with Dr. Fox

Hi, Ellen,

I wanted to let you know that we are working on the paperwork to get a consulting agreement in place with Dr. Fox, so that she can work on non-CBI-related Task 3 analyses. I have sent her a limitation of future contracting clause document that we need to have signed. I also sent her a template she can use to describe what she has been doing for you over the past two months, and how many hours she has spent on it thus far. I requested that, aside from those two tasks, she do no more technical work until we have a consulting agreement in place and we authorize her to resume work.

I would ask all of you, please, to include me in any communication (telephone calls, emails, etc.), and for Dr. Fox to cc: me on any written deliverables. That is the correct protocol for EPA working through RTI with a consultant, and since RTI (and I as WA leader) are in the middle, it is critical that I know what is going on. I'm sure you understand.

Thanks very much-

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



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**From:** Collins, JoLynn  
**To:** Belk, Ellen; Katherine B. Heller (kbh@rti.org)  
**CC:** Brooks Depro (bmd@rti.org)  
**Sent:** 5/29/2014 4:01:17 PM  
**Subject:** RE: Contract Work Assignment: Texas Regional Haze Evaluation  
**Attachments:** EPA-RTI 5-29-14 Meeting Notes.docx

Here are notes from today's meeting. Please let me know if I have missed something or possibly captured something incorrectly.

JoLynn

-----Original Appointment-----

**From:** Belk, Ellen  
**Sent:** Thursday, May 29, 2014 12:28 PM  
**To:** Belk, Ellen; Collins, JoLynn; Katherine B. Heller (kbh@rti.org)  
**Subject:** Contract Work Assignment: Texas Regional Haze Evaluation  
**When:** Thursday, May 29, 2014 1:30 PM-2:00 PM (UTC-06:00) Central Time (US & Canada).  
**Where:** R6-ConfRm-PecanTree-06111@epa.gov

Conference Line: Ex. 6 - Personal Privacy  
Conference Code:

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/29/2014 2:51:13 PM  
**Subject:** Accepted: Contract Support for Texas Regional Haze Evaluation

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/29/2014 2:09:11 PM  
**Subject:** RE: Contract Work Assignment: Texas Regional Haze Evaluation

Ellen,

I have invited Brooks Depro to sit in on the call, since he's our program manager on the contract. We look forward to talking with you at 2:30.

Best, Kathy

-----Original Appointment-----

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]

**Sent:** Thursday, May 29, 2014 12:28 PM

**To:** Belk, Ellen; Collins, JoLynn; Heller, Katherine B.

**Subject:** Contract Work Assignment: Texas Regional Haze Evaluation

**When:** Thursday, May 29, 2014 1:30 PM-2:00 PM (UTC-06:00) Central Time (US & Canada).

**Where:** R6-ConfRm-PecanTree-06I11@epa.gov

Conference Line: 866-299-3188

Conference Code: 214 665 2164

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/29/2014 1:21:06 PM  
**Subject:** Accepted: Contract Work Assignment: Texas Regional Haze Evaluation

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Depro, Brooks M.  
**Sent:** 5/29/2014 8:35:24 AM  
**Subject:** available to discuss WA 3-09?

Hi, Ellen-

Brooks and I would like to meet with you as soon as convenient for you to discuss how to forward on Task 3 of the WA. Brooks and I are available except from 12-1 EDT. Please let us know what time would work for you.

Thank you,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Depro, Brooks M.  
**Sent:** 5/22/2014 11:21:10 AM  
**Subject:** available to discuss Task 3 of WA?

Hi, Ellen-

Are you available to discuss the work that needs to be completed under Task 3 of WA 3-09?

Brooks and I are available from now until 4 pm EDT.

Thanks,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/13/2014 2:38:59 PM  
**Subject:** Accepted: Texas Regional Haze

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 5/9/2014 3:28:26 PM  
**Subject:** consulting agreement

Ellen,

At your request I checked with our consultant office folks, and they stated that Dr. Fox's contract had been modified on 5-8-2013 to extend the POP to 3-31-2014 and to reduce her LOE from 400 to 352 hours, and NTE amount from [Ex. 6 - Personal Privacy] to [Ex. 6 - Personal Privacy] I will send a copy of that modification to Dr. Fox and ask her to send a copy to you (even though she sent her original contract to you, I'm not comfortable sending a contractual document to a third party). But I wanted to let you know that it exists.

We will modify the contract again to extent the POP to 3-31-2015, so that she can proceed with whatever work does not require the CBI data. Also, I believe "your contracts" will be talking to "our contracts" next week, so we may know more soon.

Best,

**Katherine Heller**

Senior Economist

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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



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**From:** Cooper, Donna N.  
**To:** Jones, Rodney-Daryl; Newby, William; Collins, JoLynn; Belk, Ellen  
**CC:** Depro, Brooks M.; Van Houtven, George L.; Alyemeni, Sanaa; Heller, Katherine B.; Cooper, Donna N.  
**Sent:** 4/25/2014 5:07:04 PM  
**Subject:** Contract No. EP-W-11-029; Work Assignment 3-09  
**Attachments:** RTI WA 3-09, EP-W-11-029.pdf

Hi, attached is RTI's submission in response to Work Assignment 3-09. Should you have any questions, please do not hesitate to let me know

Thanks,

*Donna N. Cooper*

Senior Contracting Officer

Post-Award Contract Management

Office of Proposal, Project & Procurement Services

RTI International

P.O. Box 12194

3040 Cornwallis Road

Research Triangle Park, NC 27709

Direct Line: (919) 541-6187

Email: [cooper@RTI.org](mailto:cooper@RTI.org)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 4/2/2014 9:48:36 AM  
**Subject:** RE: follow-on WA

No, that's all I need for now. Thanks very much!

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, April 02, 2014 9:48 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: follow-on WA

Hi Kathy,

Thank you for your message. I received word that the WA was approved in time to continue yesterday, April 1, uninterrupted. I hope that this the same message you received.

For Environ, we wish to proceed as recently discussed.  
Also, for Dr. Fox, we wish to proceed as recently discussed.

Please let me know if you have any further questions, or if I can be of assistance.

Ellen

*Ellen Belk*

U.S. EPA R6, 6PD-L, Air Program, Planning  
214-665-2164

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, April 02, 2014 8:41 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** follow-on WA

Hi, Ellen-

I wanted to let you know that RTI has received the WA continuing your work. We are preparing a mod to Environ's subcontract for the new contract year. In doing so, shall I assume that you wish them to complete the analysis tasks that we talked about with them several weeks ago?

Thank you-

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** Depro, Brooks M.  
**Sent:** 4/2/2014 9:40:53 AM  
**Subject:** follow-on WA

Hi, Ellen-

I wanted to let you know that RTI has received the WA continuing your work. We are preparing a mod to Environ's subcontract for the new contract year. In doing so, shall I assume that you wish them to complete the analysis tasks that we talked about with them several weeks ago?

Thank you-

**Katherine Heller**

Senior Economist

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**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/25/2014 2:44:11 PM  
**Subject:** Accepted: TX RH @ Mon Mar 31, 2014 12pm - 12:30pm **Ex. 6 - Personal Privacy**  
**Attachments:** invite.ics

**Phyllis Fox has accepted this invitation.**

## TX RH

Dr. Fox,

We would like to schedule a short meeting with you during the current period of performance. If you are available on Monday March 31, at 12 noon your time, that works for us. Otherwise, please advise regarding your availability toward the end of this week.

Thank you very much,

Ellen

**When** Mon Mar 31, 2014 12pm – 12:30pm Pacific Time

**Where** R6-ConfRm-PineTree-06O15 Call in Number 866-299-3188 Code 2146652164 ([map](#))

**Calendar** **Ex. 6 - Personal Privacy**

**Who**

- Belk, Ellen - organizer
- Phyllis Fox - creator
- Kordzi, Joe
- Katherine B. Heller (kbh@rti.org)
- R6-ConfRm-PineTree-06O15

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account belk.ellen@epa.gov because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 3/25/2014 11:15:48 AM  
**Subject:** Accepted: TX RH

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 3/19/2014 11:48:38 AM  
**Subject:** Declined: CBI discussion -- follow up from 3/14

---

**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/14/2014 4:39:22 PM  
**Subject:** Accepted: CBI discussion -- follow up from 3/14 @ Tue Mar 18, 2014 12pm - 12:30pm  
**Attachments:** [Ex. 6 - Personal Privacy](#)  
invite.ics

**Phyllis Fox has accepted this invitation.**

## **CBI discussion -- follow up from 3/14**

Conference Number: 866-299-3188

Participant Code: 214-665-2164

**When** Tue Mar 18, 2014 12pm – 12:30pm Pacific Time  
**Where** R6-ConfRm-CypressTree-06O02@epa.gov ([map](#))  
**Calendar** [Ex. 6 - Personal Privacy](#)  
**Who**

- Belk, Ellen - organizer
- Phyllis Fox - creator
- R6-ConfRm-CypressTree-06O02@epa.gov
- Kordzi, Joe
- Collins, JoLynn
- R6-ConfRm-PineTree-06O15
- Depro, Brooks M.
- Katherine B. Heller ([kbh@rti.org](mailto:kbh@rti.org))

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account [belk.ellen@epa.gov](mailto:belk.ellen@epa.gov) because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

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**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/14/2014 4:13:39 PM  
**Subject:** Re:

yes, noon tues works.

On Fri, Mar 14, 2014 at 1:11 PM, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:

Okay sure. I wasn't sure which coast you were on these days J I was trying to set up a call on Tuesday. How about noon on Tuesday?

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Friday, March 14, 2014 3:10 PM  
**To:** Belk, Ellen  
**Subject:**

I cant make 10 AM Pacific on Monday for the followup call. Can it be a bit later?



---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/14/2014 4:09:51 PM  
**Subject:**

I cant make 10 AM Pacific on Monday for the followup call. Can it be a bit later?

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen; Collins, JoLynn; Phyllis Fox  
**Sent:** 3/14/2014 3:35:02 PM  
**Subject:** RE: CBI discussion -- follow up from 3/14

Dr. Fox,

It would be helpful if we could review written documentation on how DOJ handles sensitive materials. Would it be possible for you to send us a link or reference to that information?

Thanks very much,

Katherine Heller

-----Original Appointment-----

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]

**Sent:** Friday, March 14, 2014 3:26 PM

**To:** Belk, Ellen; Heller, Katherine B.; Depro, Brooks M.; Collins, JoLynn; Phyllis Fox; Kordzi, Joe

**Subject:** CBI discussion -- follow up from 3/14

**When:** Tuesday, March 18, 2014 1:00 PM-1:30 PM (UTC-05:00) Eastern Time (US & Canada).

**Where:** R6-ConfRm-PineTree-06O15

Conference Num

Ex. 6 - Personal Privacy

Participant Code:

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**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/14/2014 2:13:34 PM  
**Subject:** call in no for today's call?

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/14/2014 2:10:28 PM  
**Subject:** what's the call in info?

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 3/13/2014 1:13:50 PM  
**Subject:** Accepted: CBI update

---

**From:** Collins, JoLynn  
**To:** Ex. 6 - Personal Privacy  
**CC:** Brooks Depro (bmd@rti.org); Heller, Katherine B.; Belk, Ellen  
**Sent:** 3/13/2014 11:59:16 AM  
**Subject:** Agenda for Tomorrow's Meeting

Hi Dr. Fox,

I am sending you this email message on behalf of Ellen Belk because she is currently having problems with her email. I am the Project Officer on the RTI contract that is being used for the Texas RH work.

We wanted to give you an idea of the topics for discussion in tomorrow's meeting. Here they are:

1. CAA CBI Requirements (EPA)
2. Past experience with accessing CBI from other agencies (Dr. Fox)
3. Possible options for accessing CBI under Texas RH WA (EPA/RTI)

You can call Ellen if you have any questions, as she is not sure when her access to email will be restored. Her cell number (214) 551-0746.

*JoLynn Collins*

Project Officer/GAO Audit & FMFIA Coordinator  
Office of Air Quality Planning and Standards  
Central Operations and Resources  
Room C451K; Mail Code C404-02  
T.W. Alexander Drive  
Research Triangle Park, NC 27711  
(919) 541-5671

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 3/12/2014 3:45:45 PM  
**Subject:** Meeting Forward Notification: CBI update

## Your meeting was forwarded

Heller, Katherine B. has forwarded your meeting request to additional recipients.

### Meeting

CBI update

### Meeting Time

Friday, March 14, 2014 2:15 PM - Friday, March 14, 2014 2:30 PM

### Recipients

Depro, Brooks M. (bmd@rti.org)

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

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**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/12/2014 2:02:39 PM  
**Subject:** Accepted: CBI update @ Fri Mar 14, 2014 11:15am - 11:30am **Ex. 6 - Personal Privacy**  
**Attachments:** invite.ics

**Phyllis Fox has accepted this invitation.**

## CBI update

**When:** Friday, March 14, 2014 1:15 PM-1:30 PM (UTC-06:00) Central Time (US & Canada).

**Where:** Conference Call **Ex. 6 - Personal Privacy** **Participant Code:** **Ex. 6 - Personal Privacy**

**Note:** The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

**When** Fri Mar 14, 2014 11:15am – 11:30am Pacific Time  
**Where** Conference Call **Ex. 6 - Personal Privacy** **Participant Code:** **Ex. 6 - Personal Privacy** ([map](#))  
**Calendar** **Ex. 6 - Personal Privacy**  
**Who**

- Belk, Ellen - organizer
- Phyllis Fox - creator
- Collins, JoLynn
- Heller, Katherine B.
- Schoellkopf, Lynde - optional
- Kordzi, Joe - optional

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account belk.ellen@epa.gov because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.



---

**From:** Depro, Brooks M.  
**To:** Belk, Ellen  
**CC:** Heller, Katherine B.  
**Sent:** 2/21/2014 7:50:37 PM  
**Subject:** RE: WA 2-12 Questions

Hi Ellen,

We discussed internally today and it is probably best if your team initiated the initial contract related questions discussed today after you have reviewed your options. We can discuss the appropriate next steps at that time. Have a nice weekend and let us know if I can be of further assistance.

Best regards,  
Brooks

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** bmd@rti.org  
**Sent:** 2/21/2014 10:31:06 AM  
**Subject:** contract, EPA contact information

Ellen,

Thank you for the call this morning. I hope we can find a way for Dr. Fox to access the CBI information. Here are the pertinent EPA folks for this contract:

Rodney-Daryl Jones, EPA Contracting Officer for this contract, RTP, 919-541-3112, [Jones.rodney-Daryl@Epa.gov](mailto:Jones.rodney-Daryl@Epa.gov)  
JoLynn Collins, EPA Project Officer for this contract, RTP, 919-541-567, [Collins.jolynn@Epa.gov](mailto:Collins.jolynn@Epa.gov)  
Roberto Morales, EPA Document Control Officer, RTP, 919-541-0880, [Morales.roberto@Epa.gov](mailto:Morales.roberto@Epa.gov)

I believe our contracting officer will be reaching out to the EPA CO and PO to set up a meeting. I will send you a copy of the contract on a separate email.

Best,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** bmd@rti.org  
**Sent:** 2/21/2014 9:50:24 AM  
**Subject:** Accepted: CBI

Ellen,

I'm available at 10, but I have a meeting at 10:30. I have forwarded the invitation to our CBI DCO, Carla Freeman, and to Brooks Depro, the project leader for this EPA contract.

I fully understand how cumbersome and costly these procedures are. What I believe to be the case is that the rules we are following are those that EPA requires under the CAA. It is my understanding that we can't change the procedures. Have you talked to Roberto Morales, the OAQPS CBI DCO? He might have some ideas.

Talk to you at 10.

Kathy

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 2/21/2014 9:16:47 AM  
**Subject:** Meeting Forward Notification: CBI

## Your meeting was forwarded

Heller, Katherine B. has forwarded your meeting request to additional recipients.

### Meeting

CBI

### Meeting Time

Friday, February 21, 2014 10:00 AM - Friday, February 21, 2014 10:30 AM

### Recipients

Depro, Brooks M. (bmd@rti.org), Freeman, Carla S.

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

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**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 2/20/2014 2:58:37 PM  
**Subject:** CBI Training Slides  
**Attachments:** CBI Training for Consultant P.Fox 2-19-14.pdf

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 2/10/2014 3:16:41 PM  
**Subject:** RE: TX Haze: Cost estimate

Yes, that's correct.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, February 10, 2014 12:06 PM  
**To:** Heller, Katherine B.  
**Subject:** FW: TX Haze: Cost estimate

Kathy,  
In the message below, Ou refers to an unexpended budget of [Ex. 4 - CBI]. Could you please clarify which budget that is? Perhaps the RTI – Environ budget and not the EPA – RTI budget for this task?

Thank you.  
Ellen

*Ellen Belk*  
Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Tel: 214-665-2164

---

**From:** Uarporn Nopmongcol [mailto:unopmongcol@environcorp.com]  
**Sent:** Thursday, January 30, 2014 5:54 PM  
**To:** Belk, Ellen  
**Cc:** Heller, Katherine B. (kbh@rti.org); Greg Yarwood; Snyder, Erik; Feldman, Michael  
**Subject:** TX Haze: Cost estimate

Ellen,

Our estimate to complete two additional PSAT CAMx runs is [Ex. 4 - CBI]. Currently, our unexpended budget is about [Ex. 4 - CBI].  
We are still checking on our project schedules and should be able to confirm our machine availability next week.

Thank you.  
Ou

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---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 2/5/2014 10:05:07 AM  
**Subject:** RE: update on CBI process

Thanks, Ellen!

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, February 05, 2014 10:04 AM  
**To:** Phyllis Fox; Heller, Katherine B.  
**Subject:** RE: update on CBI process

Kathy,  
I am working on indentifying an EPA CBI DCO contact in San Francisco for you, and will get back to you soon.  
Ellen

---

**From:** Phyllis Fox [mailto:Ex. 6 - Personal Privacy]  
**Sent:** Tuesday, February 04, 2014 1:22 PM  
**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen  
**Subject:** Re: update on CBI process

Does this mean that I can only access the CBI at Region 9?

I would really prefer to work with it in my office.

On Tue, Feb 4, 2014 at 11:16 AM, Heller, Katherine B. <[kbh@rti.org](mailto:kbh@rti.org)> wrote:

Hi,

I spoke with Carla Freeman, our CBI Document Control Officer (DCO). She will be contacting Dr. Fox to set up a time for CBI training and quiz to get her cleared for access to CBI under this EPA contract.

Phyllis, please expect a call from Carla Freeman of RTI's Industrial Security Office on Friday or Monday to discuss what time would work for you to do the training/quiz.

Ellen,

Please provide us the name of the EPA CBI DCO at the San Francisco EPA office. Once Dr. Fox completes her training, Carla will contact that person to let them know that Dr. Fox is cleared for CBI access under this contract. You can then send the CBI documents to SF, and the EPA DCO there will work with Phyllis to provide any site-specific training and to give her access to the information.

Let me know if you have any questions.

Best,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Phyllis Fox  
**To:** Heller, Katherine B.  
**CC:** Belk, Ellen  
**Sent:** 2/4/2014 2:21:51 PM  
**Subject:** Re: update on CBI process

Does this mean that I can only access the CBI at Region 9?

I would really prefer to work with it in my office.

On Tue, Feb 4, 2014 at 11:16 AM, Heller, Katherine B. <[kbh@rti.org](mailto:kbh@rti.org)> wrote:

Hi,

I spoke with Carla Freeman, our CBI Document Control Officer (DCO). She will be contacting Dr. Fox to set up a time for CBI training and quiz to get her cleared for access to CBI under this EPA contract.

Phyllis, please expect a call from Carla Freeman of RTI's Industrial Security Office on Friday or Monday to discuss what time would work for you to do the training/quiz.

Ellen,

Please provide us the name of the EPA CBI DCO at the San Francisco EPA office. Once Dr. Fox completes her training, Carla will contact that person to let them know that Dr. Fox is cleared for CBI access under this contract. You can then send the CBI documents to SF, and the EPA DCO there will work with Phyllis to provide any site-specific training and to give her access to the information.

Let me know if you have any questions.

Best,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



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**From:** Heller, Katherine B.  
**To:** Phyllis Fox  
**CC:** Belk, Ellen  
**Sent:** 2/4/2014 2:45:59 PM  
**Subject:** RE: update on CBI process

Phyllis,

That is my understanding, although EPA R9 DCO may have procedures to allow you to sign the documents out.

At RTI, we have a "CBI room" where all CBI docs are stored, and all of our work on CBI data must take place in that room, with computers that aren't linked to any network. Any documents we produce based on the CBI data (including summaries that are intended to mask the CBI) are treated as CBI until EPA reviews and declassifies. On the other hand, when we have meetings with EPA, etc., we can sometimes sign the CBI out for that purpose. The procedures are burdensome, definitely, but worth it to have access to CBI data.

At minimum, I expect the CBI would need to be returned for storage at the R9 CBI office overnight.

Kathy

**From:** Phyllis Fox [mailto:Ex. 6 - Personal Privacy]  
**Sent:** Tuesday, February 04, 2014 2:22 PM  
**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen  
**Subject:** Re: update on CBI process

Does this mean that I can only access the CBI at Region 9?

I would really prefer to work with it in my office.

On Tue, Feb 4, 2014 at 11:16 AM, Heller, Katherine B. <[kbh@rti.org](mailto:kbh@rti.org)> wrote:  
Hi,

I spoke with Carla Freeman, our CBI Document Control Officer (DCO). She will be contacting Dr. Fox to set up a time for CBI training and quiz to get her cleared for access to CBI under this EPA contract.

Phyllis, please expect a call from Carla Freeman of RTI's Industrial Security Office on Friday or Monday to discuss what time would work for you to do the training/quiz.

Ellen,  
Please provide us the name of the EPA CBI DCO at the San Francisco EPA office. Once Dr. Fox completes her training, Carla will contact that person to let them know that Dr. Fox is cleared for CBI access under this contract. You can then send the CBI documents to SF, and the EPA DCO there will work with Phyllis to provide any site-specific training and to give her access to the information.

Let me know if you have any questions.

Best,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
[919.541.5802](tel:919.541.5802) | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



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**From:** Heller, Katherine B.  
**To:** Ex. 6 - Personal Privacy Belk, Ellen  
**Sent:** 2/4/2014 2:16:22 PM  
**Subject:** update on CBI process

Hi,

I spoke with Carla Freeman, our CBI Document Control Officer (DCO). She will be contacting Dr. Fox to set up a time for CBI training and quiz to get her cleared for access to CBI under this EPA contract.

Phyllis, please expect a call from Carla Freeman of RTI's Industrial Security Office on Friday or Monday to discuss what time would work for you to do the training/quiz.

Ellen,

Please provide us the name of the EPA CBI DCO at the San Francisco EPA office. Once Dr. Fox completes her training, Carla will contact that person to let them know that Dr. Fox is cleared for CBI access under this contract. You can then send the CBI documents to SF, and the EPA DCO there will work with Phyllis to provide any site-specific training and to give her access to the information.

Let me know if you have any questions.

Best,

**Katherine Heller**

Senior Economist

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919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 2/1/2014 12:04:12 PM  
**Subject:** Accepted: Texas Regional Haze Evaluation: Cost Analysis

**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 1/31/2014 5:22:29 PM  
**Subject:** Accepted: Texas Regional Haze Evaluation: Cost Analysis @ Mon Feb 3, 2014 1pm - 1:30pm  
**Attachments:** Ex. 6 - Personal Privacy  
invite.ics

**Phyllis Fox has accepted this invitation.**

### **Texas Regional Haze Evaluation: Cost Analysis**

**When:** Monday, February 03, 2014 3:00 PM-3:30 PM (UTC-06:00) Central Time (US & Canada).

**Where:** R6-ConfRm-PineTree-06O15

**Note:** The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

**Conference Line:** Ex. 6 - Personal Privacy  
**Participant Code:** Ex. 6 - Personal Privacy

**When** Mon Feb 3, 2014 1pm – 1:30pm Pacific Time

**Where** R6-ConfRm-PineTree-06O15 ([map](#))

**Calendar** Ex. 6 - Personal Privacy

**Who**

- Belk, Ellen - organizer
- Phyllis Fox - creator
- Kordzi, Joe
- R6-ConfRm-PineTree-06O15
- Heller, Katherine B.
- Donaldson, Guy - optional
- Snyder, Erik - optional
- Feldman, Michael - optional

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account [belk.ellen@epa.gov](mailto:belk.ellen@epa.gov) because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/30/2014 2:17:45 PM  
**Subject:** RE: Dr. Fox

OK, great. I'm available all afternoon.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, January 30, 2014 2:16 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Dr. Fox

Thanks Kathy. I will set up a call with you and Dr. Fox for Mon.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, January 30, 2014 12:55 PM  
**To:** Belk, Ellen  
**Subject:** Dr. Fox

Hi, Ellen-

See below, Phyllis Fox is available for a call Monday afternoon. Note that she cites noon Pacific as the beginning of her availability.

I sent an email back to confirm that this means she has some time available, and she says she will need to do some juggling, and thus needs to have a firm schedule for her work.

Brooks Depro (our project manager for this contract) suggests you alert JoLynn Collins as quickly as possible that you will need to continue this work into the next contract year.

Thanks,  
Kathy

**From:** Phyllis Fox **Ex. 6 - Personal Privacy**  
**Sent:** Thursday, January 30, 2014 1:22 PM  
**To:** Heller, Katherine B.  
**Subject:** Re: EPA R6 inquiring about your availability

Any time Monday from noon Pacific through the end of the day would work for a call.

On Thu, Jan 30, 2014 at 9:56 AM, Heller, Katherine B. <kbh@rti.org> wrote:  
Hi, Dr. Fox-  
I hope you are doing well.

We just had a call with Ellen Belk and others at EPA to discuss the TX Regional Haze work. They asked me to check on your availability to do some work for them over the next couple of months, and assuming that you have some time available, want to set up a call to discuss the work sometime on Monday.

So, please let me know if you have time available during the next couple of months to do some work for EPA R6. And assuming you do have some time available, please let me know what time on Monday would work for a call with

EPA.

Thanks very much,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/30/2014 1:54:31 PM  
**Subject:** Dr. Fox

Hi, Ellen-

See below, Phyllis Fox is available for a call Monday afternoon. Note that she cites noon Pacific as the beginning of her availability.

I sent an email back to confirm that this means she has some time available, and she says she will need to do some juggling, and thus needs to have a firm schedule for her work.

Brooks Depro (our project manager for this contract) suggests you alert JoLynn Collins as quickly as possible that you will need to continue this work into the next contract year.

Thanks,  
Kathy

**From:** Phyllis Fox **Ex. 6 - Personal Privacy**  
**Sent:** Thursday, January 30, 2014 1:22 PM  
**To:** Heller, Katherine B.  
**Subject:** Re: EPA R6 inquiring about your availability

Any time Monday from noon Pacific through the end of the day would work for a call.

On Thu, Jan 30, 2014 at 9:56 AM, Heller, Katherine B. <[kbh@rti.org](mailto:kbh@rti.org)> wrote:  
Hi, Dr. Fox-  
I hope you are doing well.

We just had a call with Ellen Belk and others at EPA to discuss the TX Regional Haze work. They asked me to check on your availability to do some work for them over the next couple of months, and assuming that you have some time available, want to set up a call to discuss the work sometime on Monday.

So, please let me know if you have time available during the next couple of months to do some work for EPA R6. And assuming you do have some time available, please let me know what time on Monday would work for a call with EPA.

Thanks very much,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
[919.541.5802](tel:919.541.5802) | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/30/2014 12:06:29 PM  
**Subject:** Meeting Forward Notification: Evaluating Texas Regional Haze

## **Your meeting was forwarded**

Heller, Katherine B. has forwarded your meeting request to additional recipients.

### **Meeting**

Evaluating Texas Regional Haze

### **Meeting Time**

Thursday, January 30, 2014 12:15 PM - Thursday, January 30, 2014 12:45 PM

### **Recipients**

Depro, Brooks M. (bmd@rti.org)

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/30/2014 12:05:43 PM  
**Subject:** RE: have not contacted Environ about this call

OK, great. Thanks! I didn't see them on the invite, so thought it might just be RTI. Talk to you in a few.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, January 30, 2014 12:05 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: have not contacted Environ about this call

no, I have invited Greg and Ou and anyone else at Environ that they would like to include

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, January 30, 2014 11:03 AM  
**To:** Belk, Ellen  
**Subject:** have not contacted Environ about this call

My understanding was that you wanted to talk to RTI about plans going forward, but not necessarily talk to folks from Environ at this point. Is that correct?

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/30/2014 12:03:13 PM  
**Subject:** have not contacted Environ about this call

My understanding was that you wanted to talk to RTI about plans going forward, but not necessarily talk to folks from Environ at this point. Is that correct?

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 1/29/2014 11:06:16 AM  
**Subject:** Accepted: Evaluating Texas Regional Haze

Hi, Ellen-

I received your voice message, and look forward to assisting with the tasks at hand. I am available for the conference call on Thursday.

Today, due to snow in NC, I am working from home. I am available by email and also by cell phone: Ex. 6 - Personal Privacy

Best,

Katherine Heller

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/7/2013 6:11:51 AM  
**Subject:** RE: Dr. Fox's schedule related to Phase II

I'm so sorry about your tree. We're expecting that weather tonight, but it isn't as odd in NC as it is in Dallas. I'll call Dr Fox and let you know what her availability would be. Have a safe weekend!

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, December 06, 2013 7:20 PM  
**To:** Heller, Katherine B.  
**Subject:** Dr. Fox's schedule related to Phase II

Hi Katherine,

Thank you very much for contacting Environ and for your voicemail message with schedule information.

Sometime next week, could you please contact Dr. Fox also to learn whether she may have any availability for TX regional haze work this spring?

Many thanks,  
Ellen

(It is icy today in the Dallas area. One of my front trees fell over under the weight of the ice.)

Ellen Belk  
Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 12/5/2013 9:58:00 AM  
**Subject:** got your message

Hi, Ellen-

I am sorry to have missed your call. I hope you had a good Thanksgiving and are surviving the strange weather this fall!

I will be happy to set up calls with both Environ and Dr. Fox. Would you like to suggest some times that would work for EPA, and I will pass those along to them? Or you could contact them directly if that would be more efficient, and just include me on the email. Let me know how you wish to proceed.

Thanks, and I look forward to talking with you soon-

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 9/30/2013 3:01:20 PM  
**Subject:** do you have time for a short call?

Hi, Ellen-

Prior to the possible events tomorrow, I would like to be clear on your direction for us for the near future. If you have time for a very short call to verify what Environ and RTI should be up to, I would be grateful. Thanks-

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Tanarit Sakulyanontvittaya  
**To:** Belk, Ellen  
**Sent:** 9/17/2013 2:48:37 PM  
**Subject:** Accepted: FW: Texas Regional Haze: place holder for possible meeting with Environ

---

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**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 9/16/2013 1:31:19 PM  
**Subject:** Accepted: Texas Regional Haze: place holder for possible meeting with Environ

---

**From:** Greg Yarwood  
**To:** Belk, Ellen; kbh@rti.org  
**CC:** Uarporn Nopmongcol; Collins, JoLynn; Tanarit Sakulyanontvittaya  
**Sent:** 9/7/2013 2:56:43 PM  
**Subject:** RE: Contract: Texas Regional Haze  
**Attachments:** Memo\_TXHAZE\_2018CAMx.7Sept13.docx

Ellen

I attach the revised memorandum as requested

Regards - Greg

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, September 06, 2013 7:17 AM  
**To:** kbh@rti.org  
**Cc:** Uarporn Nopmongcol; Greg Yarwood; Collins, JoLynn  
**Subject:** Contract: Texas Regional Haze

Katherine,

We continue to appreciate the work of RTI / Environ on this project.

At this time, we would like for RTI / Environ to complete the few minor edits we had previously sent on the draft memorandum (8/22/13), and to have RTI / Environ send us a final memorandum which incorporates the edits.

If you are able to estimate your schedule, it would be helpful to us to know approximately when we may expect a final memo.

Thank you very much,  
Ellen

*Ellen Belk*

Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, August 22, 2013 3:16 PM  
**To:** Heller, Katherine B.  
**Cc:** 'unopmongcol@environcorp.com'; 'gyarwood@environcorp.com'; Collins, JoLynn  
**Subject:** Texas Regional Haze

Katherine,

We appreciate the work of Tan, Ou and Greg at Environ on the draft memorandum. We have reviewed the most recent draft of the 2018 memorandum sent on 7/29 and the accompanying spreadsheets and would like Environ to make a few minor edits based on our preliminary review and discussions. These edits to the memorandum can be found as tracked changes in the attached document.

At present, we are continuing our review and evaluation of the data provided by Environ to date. At this time there is

no additional work needed on the part of Environ, with the exception of the minor edits described above. In the meantime, we request that Environ please provide us with copies of any and all information relied upon in generating the memorandum, including the data and modeling files. I know that Environ has already shared many if not all of the related files, and ask that Environ continue to coordinate with us as necessary to complete the transfer of related draft files or draft documents to us.

Once we have the files and have completed our review of the draft documents, we will be back in touch with direction on how to proceed.

Thank you,

*Ellen Belk*

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---

This message contains information that may be confidential, privileged or otherwise protected by law from disclosure. It is intended for the exclusive use of the Addressee(s). Unless you are the addressee or authorized agent of the addressee, you may not review, copy, distribute or disclose to anyone the message or any information contained within. If you have received this message in error, please contact the sender by electronic reply to [email@environcorp.com](mailto:email@environcorp.com) and immediately delete all copies of the message.

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 9/6/2013 12:06:40 PM  
**Subject:** RE: Contract: Texas Regional Haze

Ellen,  
I just got your voice mail; I was out of the office this a.m. and am working at home this afternoon. I will contact Environ and get an estimate, if they don't respond directly.

Best,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, September 06, 2013 10:17 AM  
**To:** Heller, Katherine B.  
**Cc:** 'unopmongcol@environcorp.com'; 'gyarwood@environcorp.com'; Collins, JoLynn  
**Subject:** Contract: Texas Regional Haze

Katherine,

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**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, August 22, 2013 3:16 PM  
**To:** Heller, Katherine B.  
**Cc:** 'unopmongcol@environcorp.com'; 'gyarwood@environcorp.com'; Collins, JoLynn  
**Subject:** Texas Regional Haze

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Thank you,

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Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**CC:** unopmongcol@environcorp.com; gyarwood@environcorp.com; Collins, JoLynn; bmd@rti.org  
**Sent:** 8/22/2013 3:21:23 PM  
**Subject:** RE: Texas Regional Haze

Ellen,  
Thank you for the update and direction.

Ou, Tan, and Greg-please proceed with delivering all the documentation requested. Please cc me on all correspondence so I can stay informed of progress.

Thanks,  
Katherine

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, August 22, 2013 3:16 PM  
**To:** Heller, Katherine B.  
**Cc:** 'unopmongcol@environcorp.com'; 'gyarwood@environcorp.com'; Collins, JoLynn  
**Subject:** Texas Regional Haze

Katherine,

We appreciate the work of Tan, Ou and Greg at Environ on the draft memorandum. We have reviewed the most recent draft of the 2018 memorandum sent on 7/29 and the accompanying spreadsheets and would like Environ to make a few minor edits based on our preliminary review and discussions. These edits to the memorandum can be found as tracked changes in the attached document.

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Thank you,

*Ellen Belk*

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Fax: 214-665-7263

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 7/2/2013 1:13:36 PM  
**Subject:** Re: Brief update

Yes, I'm available today at 11 Pacific. However, I'm confused. I got a cancellation for said call for today, which was scheduled last week, but no invite for a replacement call today.

So, is the call for today on or of, and if on, what is the call in info??

On Tue, Jul 2, 2013 at 6:12 AM, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:

Good morning Phyllis,

Would you be available for a brief call for an update on the TX RH Cost Analysis project?

I have tentatively sent an invite for a conference call at 1 pm central in case that works for you. Otherwise, please let me know when would be a good time.

Thanks,

Ellen

*Ellen Belk*

Environmental Engineer

U.S. Environmental Protection Agency, Region 6

Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue

Dallas Texas 75202

Tel: [214-665-2164](tel:214-665-2164)

Fax: [214-665-7263](tel:214-665-7263)

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 7/1/2013 11:44:37 AM  
**Subject:** Accepted: Brief update



---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/11/2013 4:49:34 PM  
**Subject:** RE: Contract EP-W-11-029 Texas Regional Haze Evaluation

Ellen,  
Thank you for helping me get up to speed. I look forward to working with you also.

Best,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Tuesday, June 11, 2013 4:48 PM  
**To:** Heller, Katherine B.  
**Subject:** FW: Contract EP-W-11-029 Texas Regional Haze Evaluation

Hi Kathy,  
It was good to meet with you today.  
Here is the consent decree information I mentioned.  
I look forward to working with you.  
Ellen

*Ellen Belk*

Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

---

**From:** Belk, Ellen  
**Sent:** Thursday, May 09, 2013 12:20 PM  
**To:** 'snw@rti.org'  
**Cc:** Collins, JoLynn  
**Subject:** Contract EP-W-11-029 Texas Regional Haze Evaluation

Susan,

In our current Statement of Work, we indicated that "We will notify the Contractor in a timely manner if the EPA R6 deadlines for action on the Texas RH SIP change under the Consent Decree."

Consistent with that, I would you to know that there has been activity in Case 1:11-cv-01548-ABJ NATIONAL PARKS CONSERVATION ASSOCIATION et al v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY et al Order on Motion to Amend/Correct. In an order filed with the court May 7, 2013, an extension for the proposal and final promulgation deadline for the Texas Regional Haze action was approved as follows:

The Proposed Promulgation Deadline is extended to May 15, 2014, and  
The Final Promulgation Deadline is extended to December 13, 2014.

Thank you,  
Ellen

*Ellen Belk*

Environmental Engineer  
U.S. Environmental Protection Agency, Region 6

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1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/5/2013 12:15:55 PM  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Ellen-

Great, thanks very much. Have a good weekend, and we will talk to you on Tuesday!

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, June 05, 2013 12:14 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Thanks Kathy,

We can use my conference line:

Number Ex. 6 - Personal Privacy  
Code Ex. 6 - Personal Privacy

I look forward to working with you on this project.

Ellen

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 05, 2013 11:11 AM  
**To:** Belk, Ellen  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Thanks, we will schedule it. Do you want us to call you directly, or should we set up a conference line?

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, June 05, 2013 12:10 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Tues 6/11 at 3 pm eastern.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 05, 2013 11:05 AM  
**To:** Belk, Ellen; Depro, Brooks M.  
**Cc:** Van Houtven, George L.  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Ellen,  
We are free next week at 10 a.m. or 3 p.m. Eastern on Tuesday, and at 3 p.m. on Wednesday. Please let us know which works best for you. I look forward to working with you on this project, and will review project materials between now and next week to get up to speed.

Thanks,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, June 05, 2013 12:01 PM

**To:** Depro, Brooks M.  
**Cc:** Heller, Katherine B.; Van Houtven, George L.  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Dear Brooks.

Thank you for contacting me about the change in leadership at RTI. I look forward to continuing to work on this contract with RTI with Kathy Heller.

As you recommend, a brief meeting next week to discuss the transition sounds good. Some possible times are Wed 6/12 at 10 am Eastern (9 am Central), or Tues or Wed at 2 or 3 pm Eastern (1 or 2 pm Central).

Best regards,  
Ellen

*Ellen Belk*  
Environmental Engineer  
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Air Planning Section, 6PD-L  
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Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

---

**From:** Depro, Brooks M. [<mailto:bmd@rti.org>]  
**Sent:** Wednesday, June 05, 2013 10:09 AM  
**To:** Belk, Ellen  
**Cc:** Heller, Katherine B.; Van Houtven, George L.  
**Subject:** New RTI project leader for WA 2-12 Contract: EP-W-11-029

Dear Ellen,

Thank you for taking the time to discuss the personnel changes this morning. I would like to introduce you to Kathy Heller, who will take over the leadership for Susan. Would there be a convenient time for you to meet with us next week to discuss the transition?

Our contact numbers:

Kathy Heller:  
919-541-5802

Brooks Depro:  
919-541-6729

Please to do not hesitate to call if you have any question or concerns.

Best,  
Brooks

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen  
**Sent:** 6/5/2013 12:10:35 PM  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Thanks, we will schedule it. Do you want us to call you directly, or should we set up a conference line?

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, June 05, 2013 12:10 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Tues 6/11 at 3 pm eastern.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 05, 2013 11:05 AM  
**To:** Belk, Ellen; Depro, Brooks M.  
**Cc:** Van Houtven, George L.  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Ellen,  
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Thanks,  
 Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Wednesday, June 05, 2013 12:01 PM  
**To:** Depro, Brooks M.  
**Cc:** Heller, Katherine B.; Van Houtven, George L.  
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Dear Brooks.

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Best regards,  
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 Fax: 214-665-7263

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**From:** Depro, Brooks M. [<mailto:bmd@rti.org>]  
**Sent:** Wednesday, June 05, 2013 10:09 AM  
**To:** Belk, Ellen  
**Cc:** Heller, Katherine B.; Van Houtven, George L.  
**Subject:** New RTI project leader for WA 2-12 Contract: EP-W-11-029

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Brooks Depro:  
919-541-6729

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Best,  
Brooks

---

**From:** Heller, Katherine B.  
**To:** Belk, Ellen; Depro, Brooks M.  
**CC:** Van Houtven, George L.  
**Sent:** 6/5/2013 12:05:26 PM  
**Subject:** RE: New RTI project leader for WA 2-12 Contract: EP-W-11-029

Ellen,

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Brooks Depro:  
919-541-6729

Please to do not hesitate to call if you have any question or concerns.

Best,  
Brooks



---

**From:** Depro, Brooks M.  
**To:** Belk, Ellen  
**CC:** Heller, Katherine B.; Van Houtven, George L.  
**Sent:** 6/5/2013 11:09:22 AM  
**Subject:** New RTI project leader for WA 2-12 Contract: EP-W-11-029

Dear Ellen,

Thank you for taking the time to discuss the personnel changes this morning. I would like to introduce you to Kathy Heller, who will take over the leadership for Susan. Would there be a convenient time for you to meet with us next week to discuss the transition?

Our contact numbers:

Kathy Heller:  
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Brooks Depro:  
919-541-6729

Please do not hesitate to call if you have any question or concerns.

Best,  
Brooks

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 5/8/2013 1:16:40 PM  
**Subject:**

I just got a contract extension to March 2014 from RTI. Perhaps this contains the seed of an answer?

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 4/23/2013 4:36:55 PM  
**Subject:** Re: CCR (Central Contractor Registry) Expiration Notice

I sorta suspected that but get so many of these gov contracting emails, never perfectly sure.

Thanks.

On Tue, Apr 23, 2013 at 1:33 PM, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:

Dr. Fox,

The message below is not relevant to your contracting work as a subcontractor to RTI on the work assignment for Texas regional haze.

I believe the message is from a private company that is hoping for your business in helping your company make the transition from the Central Contractor Registry (CCR) to the System for Award Management (SAM). If you would like to register your company in SAM (or migrate your record from CCR to SAM), you may do so at no charge at the following website: <https://sam.gov>.

However, even though it is not necessary for our project, if you decide to register your company in SAM in order to be available for other work with the government, I will do my best to provide you with further assistance.

Best regards,

Ellen

*Ellen Belk*

Environmental Engineer

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Fax: [214-665-7263](tel:214-665-7263)

---

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Tuesday, April 23, 2013 2:47 PM  
**To:** Belk, Ellen  
**Subject:** Fwd: CCR (Central Contractor Registry) Expiration Notice

I dont understand this email. Do I have to do something to stay in the govt. contracting system?

----- Forwarded message -----

From: <[Support@govbizguide.com](mailto:Support@govbizguide.com)>  
Date: Mon, Apr 22, 2013 at 6:20 AM  
Subject: CCR (Central Contractor Registry) Expiration Notice  
To: [Ex. 6 - Personal Privacy](#)

[View Web Version](#)

[Email Questions](#)

## **Your CCR Account is Set to Expire on 4/29/2013**

### **For Phyllis Fox**

Your *CAGE* Code is: [Ex. 6 - Personal Privacy](#)

We are GovBizGuide, a government contract consulting firm. As you may already know, effective July 2012 the **Central Contractor's Registry (CCR)** was replaced by the new **System for Award Management (SAM)**. GovBizGuide has been listening to our existing clients. Many have found the CCR to SAM migration process to be challenging. We assume there are many other businesses that are similarly struggling with the CCR to SAM migration. You've received this email because your deadline for CCR/SAM renewal is fast approaching on 4/29/2013.

To assist in this process and to make the transition as easy as possible, GovBizGuide has created a couple of options to assist you in the SAM Migration & Update process.

For more information about our how GovBizGuide can help

[Click Here](#)

[Or Call](#)

**1-877-635-5112**

[Click here to unsubscribe.](#)

**Ex. 6 - Personal Privacy**

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 4/23/2013 3:47:27 PM  
**Subject:** Fwd: CCR (Central Contractor Registry) Expiration Notice

I dont understand this email. Do I have to do something to stay in the govt. contracting system?

----- Forwarded message -----

From: <Support@govbizguide.com>  
Date: Mon, Apr 22, 2013 at 6:20 AM  
Subject: CCR (Central Contractor Registry) Expiration Notice  
To: Ex. 6 - Personal Privacy

[View Web Version](#)

[Email Questions](#)



## **Your CCR Account is Set to Expire on 4/29/2013 For Phyllis Fox**

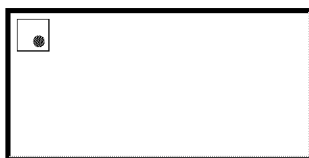
Your *CAGE* Code is: Ex. 6 - Personal Privacy

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For more information about our how GovBizGuide can help

[Click Here](#)



Or Call

**1-877-635-5112**

[Click here](#) to unsubscribe.



**Ex. 6 - Personal Privacy**



---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/18/2013 11:49:57 AM  
**Subject:** Re: SAM Security Incident

I am always hesitant to click on any link in any email that comes from someone I don't communicate with everyday as lots of folks claim to be people they aren't and use email addresses very similar to the real one.

Thanks for checking this one out.

On Mon, Mar 18, 2013 at 11:24 AM, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:

Dr. Fox,

No, I do not think this is spam. This message is from GSA per the SAM email address.

You may wish to consider the steps suggested to protect against identity theft or financial loss (see the weblink in the GSA message). Also, you may wish to consider using taxpayer identification number rather than a social security number for purposes of doing business with the federal government is suggested if you are not already doing so.

Please let me know if you need additional information about this.

Sincerely,

Ellen

---

**From:** Phyllis Fox Ex. 6 - Personal Privacy  
**Sent:** Friday, March 15, 2013 5:57 PM  
**To:** Belk, Ellen  
**Subject:** Fwd: SAM Security Incident

I assume this is more spam?

Begin forwarded message:

**From:** [samadmin@sam.gov](mailto:samadmin@sam.gov)  
**Date:** March 15, 2013, 6:54:55 PM EDT  
**To:** Ex. 6 - Personal Privacy  
**Subject:** SAM Security Incident

Dear SAM user

The General Services Administration (GSA) recently has identified a security vulnerability in the System for Award Management (SAM), which is part of the cross-government Integrated Award Environment (IAE) managed by GSA.



Registered SAM users with entity administrator rights and delegated entity registration rights had the ability to view any entity's registration information, including both public and non-public data at all sensitivity levels.

Immediately after the vulnerability was identified, GSA implemented a software patch to close this exposure. As a precaution, GSA is taking proactive steps to protect and inform SAM users.

The data contained identifying information including names, taxpayer identification numbers (TINs), marketing partner information numbers and bank account information. As a result, information identifiable with your entity registered in SAM was potentially viewable to others.

Registrants using their social security numbers instead of a TIN for purposes of doing business with the federal government may be at greater risk for potential identity theft. These registrants will receive a separate email communication regarding credit monitoring resources available to them at no charge.

In the meantime, we wanted you to be aware of certain steps that all SAM users may want to take to protect against identity theft and financial loss. Specific information is available at [www.gsa.gov/samsecurity](http://www.gsa.gov/samsecurity). If you would like additional background or have questions, you may call 1-800-FED-INFO (1-800-333-4636), from 8 a.m. to 8 p.m. (ET), Monday-Friday starting Monday, March 18. We recommend that you monitor your bank accounts and notify your financial institution immediately if you find any discrepancies.

We apologize for any inconvenience or concern this situation may cause. We believe it is important for you to be fully informed of any potential risk resulting from this situation. The security of your information is a critical priority to this agency and we are working to ensure the system remains secure. We will keep you apprised of any further developments.

Sincerely,

Amanda Fredriksen  
Acting Assistant Commissioner  
Integrated Award Environment

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 3/15/2013 6:57:20 PM  
**Subject:** Fwd: SAM Security Incident

I assume this is more spam?

Begin forwarded message:

**From:** [samadmin@sam.gov](mailto:samadmin@sam.gov)  
**Date:** March 15, 2013, 6:54:55 PM EDT  
**To:** Ex. 6 - Personal Privacy  
**Subject:** SAM Security Incident

Dear SAM user

The General Services Administration (GSA) recently has identified a security vulnerability in the System for Award Management (SAM), which is part of the cross-government Integrated Award Environment (IAE) managed by GSA. Registered SAM users with entity administrator rights and delegated entity registration rights had the ability to view any entity's registration information, including both public and non-public data at all sensitivity levels.

Immediately after the vulnerability was identified, GSA implemented a software patch to close this exposure. As a precaution, GSA is taking proactive steps to protect and inform SAM users.

The data contained identifying information including names, taxpayer identification numbers (TINs), marketing partner information numbers and bank account information. As a result, information identifiable with your entity registered in SAM was potentially viewable to others.

Registrants using their social security numbers instead of a TIN for purposes of doing business with the federal government may be at greater risk for potential identity theft. These registrants will receive a separate email communication regarding credit monitoring resources available to them at no charge.

In the meantime, we wanted you to be aware of certain steps that all SAM users may want to take to protect against identity theft and financial loss. Specific information is available at [www.gsa.gov/samsecurity](http://www.gsa.gov/samsecurity). If you would like additional background or have questions, you may call 1-800-FED-INFO (1-800-333-4636), from 8 a.m. to 8 p.m. (ET), Monday-Friday starting Monday, March 18. We recommend that you monitor your bank accounts and notify your financial institution immediately if you find any discrepancies.

We apologize for any inconvenience or concern this situation may cause. We believe it is important for you to be fully informed of any potential risk resulting from this situation. The security of your information is a critical priority to this agency and we are working to ensure the system remains secure. We will keep you apprised of any further developments.

Sincerely,

Amanda Fredriksen  
Acting Assistant Commissioner  
Integrated Award Environment

---

**From:** Google Calendar on behalf of Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 2/28/2013 12:56:58 AM  
**Subject:** Accepted: TX RH: Evaluation of Controls @ Fri Mar 8, 2013 10:30am - 11:30am (belk.ellen@epa.gov)  
**Attachments:** invite.ics

Phyllis Fox has accepted this invitation.

### TX RH: Evaluation of Controls

When: Friday, March 08, 2013 12:30 PM-1:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Pine Tree

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

Fri Mar 8, 2013 10:30am - 11:30am Pacific Time

When

Where

Pine Tree ([map](#))

Calendar

belk.ellen@epa.gov

Who

• belk.ellen@epa.gov - organizer

• Phyllis Fox - creator

• Kordzi, Joe

• snw@rti.org

• Schoellkopf, Lynde - optional

• Donaldson, Guy - optional

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account belk.ellen@epa.gov because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

---

**From:** Phyllis Fox  
**To:** Belk, Ellen  
**Sent:** 2/27/2013 2:10:36 PM  
**Subject:** Re: TX RH: Evaluation of Controls

I may not have the word on my Cemex case by then, but I can participate in the call.

On Wed, Feb 27, 2013 at 2:06 PM, Belk, Ellen <[Belk.Ellen@epa.gov](mailto:Belk.Ellen@epa.gov)> wrote:  
When: Tuesday, March 05, 2013 2:00 PM-3:00 PM (UTC-06:00) Central Time (US & Canada).  
Where: tbd

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

Conference Line: Ex. 6 - Personal Privacy  
Code: Ex. 6 - Personal Privacy

**TX RH: non-CBI data and analyses**  
**R6-ConfRm-PineTree-06O15**  
**20140804T193000Z**  
**CONFIRMED**

**PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20140804T193000Z

**End Date/Time**

20140804T200000Z

**DTSTAMP**

20140804T193407Z

**ORGANIZER** ( CN="Belk, Ellen" )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E008000000003018AAE1EBAFCF0100000000000000  
010000000F8D38B652F07D240910EDC8264FE3F9C**Attendee**

mailto:

Ex. 6 - Personal Privacy

Role REQ-PARTICIPANT

**CREATED**

20140804T185625Z

**Description****Ex. 6 - Personal Privacy****Last Modified**

20140804T193407Z

**Location**

R6-ConfRm-PineTree-06O15

**Sequence Number**

0

**Status**

CONFIRMED

**Summary**

TX RH: non-CBI data and analyses

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

0

**X-MICROSOFT-CDO-OWNERAPPTID**

2021951454

**X-MICROSOFT-CDO-BUSYSTATUS**

TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**

BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**

FALSE

**X-MICROSOFT-CDO-IMPORTANCE**

1

**X-MICROSOFT-CDO-INSTTYPE**

0

**X-MICROSOFT-DISALLOW-COUNTER**

FALSE

# Texas Regional Haze Evaluation: Cost Analysis

## R6-ConfRm-PineTree-06O15

### 20140203T210000Z

### CONFIRMED

**PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20140203T210000Z

**End Date/Time**

20140203T213000Z

**DTSTAMP**

20140131T222229Z

**ORGANIZER** ( CN=Belk, Ellen )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E00800000000099D4BC9A1ECF0100000000000000  
0100000004E23D41527F9F943B20827877EAD6A73**Attendee**

mailto:

Ex. 6 - Personal Privacy

Role REQ-PARTICIPANT

**CREATED**

20140131T214015Z

**Description**

When: Monday, February 03, 2014 3:00 PM-3:30 PM (UTC-06:00) C entral Time (US &amp; Canada).

Where: R6-ConfRm-PineTree-06O15

Note: The GM T offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*

Conference Line:

Ex. 6 - Personal Privacy

Participant Code:

**Last Modified**

20140131T222228Z

**Location**

R6-ConfRm-PineTree-06O15

**Sequence Number**

0

**Status**

CONFIRMED

**Summary**

## Texas Regional Haze Evaluation: Cost Analysis

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

0

**X-MICROSOFT-CDO-OWNERAPPTID**

1906251742

**X-MICROSOFT-CDO-BUSYSTATUS**

TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**

BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**

FALSE

**X-MICROSOFT-CDO-IMPORTANCE**

1

**X-MICROSOFT-CDO-INSTTYPE**

0

**X-MICROSOFT-DISALLOW-COUNTER**

FALSE



# TX RH: Evaluation of Controls

## Pine Tree

### 20130308T183000Z

## CONFIRMED

**PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20130308T183000Z

**End Date/Time**

20130308T193000Z

**DTSTAMP**

20130228T055658Z

**ORGANIZER** ( CN=belk.ellen@epa.gov )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E0080000000040F5DA01EB14CE0100000000000000  
010000000EFC021D23CDC4B4393E2708397AD0911**Attendee**

mailto:

Ex. 6 - Personal Privacy

Role REQ-PARTICIPANT

**CREATED**

20130227T201752Z

**Description**

When: Friday, March 08, 2013 12:30 PM-1:30 PM (UTC-06:00) Cen tral Time (US &amp; Canada).

Where: Pine Tree

Note: The GMT offset above do es not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*

Conference Line:

Ex. 6 - Personal Privacy

Code

Ex. 6 - Personal Privacy

**Last Modified**

20130228T055658Z

**Location**

Pine Tree

**Sequence Number**

2

**Status**

CONFIRMED

**Summary**

TX RH: Evaluation of Controls

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

2

**X-MICROSOFT-CDO-OWNERAPPTID**

-1235540003

**X-MICROSOFT-CDO-BUSYSTATUS**

TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**

BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**

FALSE

**X-MICROSOFT-CDO-IMPORTANCE**

1

**X-MICROSOFT-CDO-INSTTYPE**

0

**X-MICROSOFT-DISALLOW-COUNTER**

FALSE

**ACTION**

DISPLAY

**Description**

This is an event reminder

**TRIGGER**

-P0DT0H15M0S

**CBI update**  
**Conference Call 866-299-3188; Participant Code: 2146652164**  
**20140314T181500Z**  
**CONFIRMED**

**PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20140314T181500Z

**End Date/Time**

20140314T183000Z

**DTSTAMP**

20140312T180239Z

**ORGANIZER** ( CN="Belk, Ellen" )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E0080000000070F48137F13DCF010000000000000000  
010000000413C0242CCF7EE42B985F919E8CFB90F**Attendee**

mailto:

Ex. 6 - Personal Privacy

Role REQ-PARTICIPANT

**CREATED**

20140312T174732Z

**Description**

When: Friday, March 14, 2014 1:15 PM-1:30 PM (UTC-06:00) Central Time (US &amp; Canada).

Where: Conference Call: Ex. 6 - Personal Privacy Participant Code: Ex. 6 - Personal Privacy

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*

**Last Modified**

20140312T180239Z

**Location**

Conference Call: Ex. 6 - Personal Privacy Participant Code: Ex. 6 - Personal Privacy

**Sequence Number**

1

**Status**

CONFIRMED

**Summary**

CBI update

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

1

**X-MICROSOFT-CDO-OWNERAPPTID**

2079078366

**X-MICROSOFT-CDO-BUSYSTATUS**

TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**

BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**

FALSE

**X-MICROSOFT-CDO-IMPORTANCE**

1

**X-MICROSOFT-CDO-INSTTYPE**

0

**X-MICROSOFT-DISALLOW-COUNTER**

FALSE

**CBI discussion -- follow up from 3/14**  
**R6-ConfRm-CypressTree-06O02@epa.gov**  
**20140318T190000Z**  
**CONFIRMED**

**PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20140318T190000Z

**End Date/Time**

20140318T193000Z

**DTSTAMP**

20140314T203922Z

**ORGANIZER** ( CN="Belk, Ellen" )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E0080000000090B9405B913FCF010000000000000000  
0100000000936FBBDACF049144B6D932C644E57D14**Attendee**

mailto: Ex. 6 - Personal Privacy

Role REQ-PARTICIPANT

**CREATED**

20140314T202220Z

**Description****Ex. 6 - Personal Privacy****Last Modified**

20140314T203922Z

**Location**

R6-ConfRm-CypressTree-06O02@epa.gov

**Sequence Number**

2

**Status**

CONFIRMED

**Summary**

CBI discussion -- follow up from 3/14

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

2

**X-MICROSOFT-CDO-OWNERAPPTID**  
-263309346

**X-MICROSOFT-CDO-BUSYSTATUS**  
TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**  
BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**  
FALSE

**X-MICROSOFT-CDO-IMPORTANCE**  
1

**X-MICROSOFT-CDO-INSTTYPE**  
0

**X-MICROSOFT-DISALLOW-COUNTER**  
FALSE

**Task 3**  
**R6-ConfRm-CypressTree-06O02@epa.gov**  
**20140708T133000Z**  
**CONFIRMED**

**PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20140708T133000Z

**End Date/Time**

20140708T140000Z

**DTSTAMP**

20140708T125812Z

**ORGANIZER** ( CN="Belk, Ellen" )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E008000000009075114DF999CF01000000000000000  
0100000003C0DB1500CC45245A78B064B03349D2F**Attendee**

Role REQ-PARTICIPANT

**Ex. 6 - Personal Privacy****CREATED**

20140708T125617Z

**Description**

Rescheduling as requested.

**Last Modified**

20140708T125812Z

**Location**

R6-ConfRm-CypressTree-06O02@epa.gov

**Sequence Number**

2

**Status**

CONFIRMED

**Summary**

Task 3

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

2

**X-MICROSOFT-CDO-OWNERAPPTID**

-718833698

**X-MICROSOFT-CDO-BUSYSTATUS**

TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**

BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**

FALSE

**X-MICROSOFT-CDO-IMPORTANCE**

1

**X-MICROSOFT-CDO-INSTTYPE**

0

**X-MICROSOFT-DISALLOW-COUNTER**

FALSE



## **Meeting Notes, Thursday May 29, 2014**

### **Meeting between RTI and EPA, Region 6 to Discuss Options for Moving Forward on the WA 3-09, Task 3 Need to Access and Analyze CBI**

#### **Attendees**

Ellen Belk, Region 6 (WAM)  
Guy Donaldson, Region 6  
Joe Kordzi, Region 6  
JoLynn Collins, OAQPS (PO)  
Kathy Heller, RTI (Project Manager)  
Brooks Depro (Program Manager)

#### **Notes**

- Due to the delays (caused by need for consultant to access CBI) with completing task 3, RTI has reassessed the in-house capabilities
- RTI has determined that the expertise exists within their Air Quality Engineering Group, and that the individuals with the expertise are currently available to do the work.
- The individuals with the expertise are certified to access and handle CBI and may be granted need to know authorization to access and handle the CBI associated with this work.
- RTI is sending info (resumes) with proposed individuals' credentials and experience conducting analysis on data from EGUs.
- RTI will meet with EPA on Friday, May 30, to discuss technical specifics about the work and assure the in-house staff has the expertise required.
- Guy Donaldson and JoLynn Collins are not available for the meeting
- EPA, Region 6 reiterated their concerns about continuing to receive the same high quality of work that they are accustomed to receiving from the consultant. RTI indicated they understand those concerns.

# Utility FGD Design Trends

Carl Weilert & Emily Meyer, Burns & McDonnell

## Table of Contents:

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2	Explanation of Notation
3	Table 1: Currently Operating FGD Units in the United States
27	Figure 1: In-Service Year of FGD Units
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30	Figure 4: Design SO <sub>2</sub> Removal Efficiency for Semi-Dry FGD Units
31	Figure 5: Provision for FGD Bypass as a Percent of the Decade
32	Figure 6: Incorporation of Spare Absorber Modules as a Percent of the Decade
33	Figure 7: Absorber Type Used for the FGD System
34	Figure 8: Absorber Material of Construction for the Wet FGD System

## Introduction:

In addition to the three figures in the *Power Engineering* article, this document contains five additional figures and a table with information for individual units. The figures seek to highlight design trends over the decades, and the table displays all the data collected.

The following page has an explanation of notation used in the table. Although most of the codes used in the EIA-860 data remain, some additions have been made. For example, the authors felt that although the EIA data does not classify dry sorbent injection (DSI) or double contact flow scrubber (DCFS) they each merit their own code. DSI is a truly “dry” method of removing SO<sub>2</sub> from flue gas and has gained popularity over the past ten years, and although DCFS can be considered a spray type absorber, it is a unique and emerging technology.

FGD data on the absorber material of construction and the oxidation mode are no longer publically available. The US Department of Energy (DOE) released a “Utility FGD Survey” in 1989 with material of construction and oxidation mode for FGD units. This information was used to complete the survey when possible; however, for the remaining units the authors had to rely on the vendors of the FGD units. If the absorber material of construction and oxidation mode was not provided, the authors could not report it.

Footnotes in the table and figures are provided to identify the source of the data or to clarify the way the data is presented. If the information reported was apparent to be incorrect based on the authors’ personal knowledge of the FGD fleet, the data was corrected, and these corrections are noted with a subscript “m”.

## Explanation of Notation:

**General**

FGD	<i>Flue Gas Desulfurization</i>
Y	<i>Yes</i>
N	<i>No</i>
NA	<i>Not Applicable</i>
NR	<i>Not Reported</i>

**Absorber Type**

BR	<i>Jet Bubbling Reactor</i>
CD	<i>Circulating Dry Scrubber</i>
DCFS	<i>Double Contact Flow Scrubber</i>
DSI	<i>Dry Sorbent Injection</i>
PA	<i>Packed</i>
SD	<i>Spray Dryer</i>
SP	<i>Spray</i>
TR	<i>Tray</i>
VE	<i>Venturi</i>

**Sorbent Type**

AF	<i>Alkaline fly ash</i>
LA	<i>Lime and alkaline fly ash</i>
LF	<i>Limestone and alkaline fly ash</i>
LI	<i>Lime</i>
LS	<i>Limestone</i>
MO	<i>Magnesium oxide</i>
SA	<i>Soda ash</i>
SC	<i>Sodium carbonate</i>
SL	<i>Soda liquid</i>

**Material of Construction**

CO	<i>Combination</i>
CS	<i>Carbon Steel</i>
FRCS	<i>Flakeglass Reinforced Resin Lined Carbon Steel</i>
FRP	<i>Fiberglass Reinforced Plastic</i>
NI	<i>Nickel Alloy</i>
RLCS	<i>Rubber Lined Carbon Steel</i>
SS	<i>Stainless Steel</i>
TL	<i>Tile Lined</i>

**Unit Manufacturers**

AD	<i>Allied</i>
AL	<i>Alstom</i>
AM	<i>American Air Filter</i>
AP	<i>Airpol</i>
AV	<i>Advatech</i>
BPE	<i>Babcock Power Environmental</i>
BW	<i>Babcock and Wilcox</i>
CH	<i>Chiyoda</i>
FMC	<i>FMC</i>
HI	<i>Hitachi</i>
HRC	<i>Hamon Research-Cottrell</i>
KE	<i>M W Kellogg</i>
MHI	<i>Mitsubishi Heavy Industries</i>
MX	<i>Marsulex</i>
SHU	<i>Saarberg-Holter</i>
SI	<i>Siemens</i>
OT	<i>Other</i>

Table 1: Currently Operating FGD Units in the United States\*

Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal Efficiency <sup>b</sup>
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							
A B Brown Generating Station	6137	1	IN	Dual Alkali	SP		SA	1979	85
A B Brown Generating Station	6137	2	IN	Dual Alkali	SP		SA	1986	90
AES Cayuga, LLC	2535	1	NY	Wet Limestone	SP		LS	1995	95
AES Cayuga, LLC	2535	2	NY	Wet Limestone	SP		LS	1995	95
AES Greenidge	2527	6a	NY	Dry Lime <sup>e</sup>	CD		LI	2007	90.5
AES Somerset (Kintigh)	6082	1	NY	Wet Limestone	SP		LS	1984	90
AES Westover (Goudey)	2526	13	NY	Dry Lime <sup>e</sup>	CD <sup>e</sup>		LI <sup>e</sup>	2008 <sup>e</sup>	98 <sup>e</sup>
Alcoa Allowance Management Inc	6705	1	IN	Wet Limestone <sup>e</sup>	SP		LS	2008	98
Alcoa Allowance Management Inc	6705	2	IN	Wet Limestone <sup>e</sup>	SP		LS	2008	98
Alcoa Allowance Management Inc	6705	3	IN	Wet Limestone <sup>e</sup>	SP		LS	2008	98
Alcoa Allowance Management Inc	6705	4	IN	Wet Limestone <sup>e</sup>	SP		LS	2008	98
Allen S King	1915	1	MN	Dry Lime	SD		LI	2007	90
Altavista Power Station	10773	1	VA	Dry Lime	SD		LA	1992	92
Altavista Power Station	10773	2	VA	Dry Lime	SD		LA	1992	92
Antelope Valley	6469	FGD1	ND	Dry Lime	SD		LA	1983	81
Antelope Valley	6469	FGD2	ND	Dry Lime	SD		LA	1985	81
Apache Station	160	2	AZ	Wet Limestone <sup>f</sup>	TR		LS	1979	85
Apache Station	160	3	AZ	Wet Limestone <sup>f</sup>	TR		LS	1979	85
Arapahoe	465	3	CO	Sodium Based	DSI <sup>n</sup>		SC	2003	50
Arapahoe	465	4	CO	Sodium Based	DSI <sup>n</sup>		SC	1993	50
Asheville	2706	1	NC	Wet Limestone	TR <sup>m</sup>		LS	2005	97
Asheville	2706	2	NC	Wet Limestone	TR <sup>m</sup>		LS	2006	97 <sup>e</sup>
B L England	2378	2	NJ	Wet Limestone	SP		LS	1995	93
Bailly Generating Station	995	78	IN	Wet Limestone	PA		LS	1992	90
Barry	3	5	AL	Wet Limestone	BR		LS	2010	95
Belews Creek	8042	1	NC	Wet Limestone <sup>e</sup>	SP		LS	2008 <sup>e</sup>	95 <sup>e</sup>
Belews Creek	8042	2	NC	Wet Limestone <sup>e</sup>	SP		LS	2008 <sup>e</sup>	95 <sup>e</sup>
Big Bend	645	FGD1	FL	Wet Limestone	TR <sup>m</sup>		LS	1999	95
Big Bend	645	FGD4	FL	Wet Limestone	SP	PA	LS	1985	95
Bonanza	7790	1-1	UT	Wet Limestone	SP		LS	1986	95

\*Note that an explanation of the superscripts can be found at the end of the table on pages 25 and 26

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Construction	Oxidation Mode
A B Brown Generating Station	6137	1	265	N	N	FMC	FRCS <sup>f</sup>	NR
A B Brown Generating Station	6137	2	265	N	N	FMC	NR	NR
AES Cayuga, LLC	2535	1	155	N	N	SHU	NR	Forced <sup>e</sup>
AES Cayuga, LLC	2535	2	167	N	N	SHU	NR	Forced <sup>e</sup>
AES Greenidge	2527	6a	113	N	N	BPE	CS <sup>e</sup>	NA
AES Somerset (Kintigh)	6082	1	655	Y	Y	AL	RLCS <sup>e</sup>	Forced <sup>e</sup>
AES Westover (Goudey)	2526	13	75	NR	NR	BPE	CS <sup>e</sup>	NA
Alcoa Allowance Management Inc	6705	1	167	N	N	BPE	SS <sup>e</sup>	Forced <sup>e</sup>
Alcoa Allowance Management Inc	6705	2	144	N	N	BPE	SS <sup>e</sup>	Forced <sup>e</sup>
Alcoa Allowance Management Inc	6705	3	144	N	N	BPE	SS <sup>e</sup>	Forced <sup>e</sup>
Alcoa Allowance Management Inc	6705	4	323	N	N	BPE	SS <sup>e</sup>	NA
Allen S King	1915	1	598	N	N	AL	CS <sup>m</sup>	NA
Altavista Power Station	10773	1	71 <sup>p</sup>	N	N	AL	CS <sup>m</sup>	NA
Altavista Power Station	10773	2		N	N	AL	CS <sup>m</sup>	NA
Antelope Valley	6469	FGD1	435	N	NR	BW	CS <sup>f</sup>	NA
Antelope Valley	6469	FGD2	435	N	Y	BW	CS <sup>f</sup>	NA
Apache Station	160	2	204	Y	N	HRC	FRCS <sup>f</sup>	NR
Apache Station	160	3	204	Y	N	HRC	FRCS <sup>f</sup>	NR
Arapahoe	465	3	46	N	Y	OT	NA	NA
Arapahoe	465	4	112	N	Y	OT	NA	NA
Asheville	2706	1	207	N	N	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Asheville	2706	2	207	NR	NR	BW	TL <sup>j</sup>	Forced <sup>e</sup>
B L England	2378	2	163	Y	N	MX	NR	NR
Bailly Generating Station	995	78	604	N	N	MHI	NR	Forced <sup>n</sup>
Barry	3	5	789	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Belews Creek	8042	1	1080	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Belews Creek	8042	2	1080	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Big Bend	645	FGD1	891	Y	N	SI	NR	Forced <sup>n</sup>
Big Bend	645	FGD4	932	Y	N	HRC	NR	Forced <sup>n</sup>
Bonanza	7790	1-1	500	Y	Y	AL	SS <sup>e</sup>	Forced <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
Boswell Energy Center	1893	3	MN	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	98 <sup>e</sup>
Boswell Energy Center	1893	AQCS2	MN	Wet Limestone <sup>e</sup>	SP	VE	AF	1980	83.2
Bowen	703	1S	GA	Wet Limestone <sup>e</sup>	BR		LS	2010	98
Bowen	703	2S	GA	Wet Limestone <sup>e</sup>	BR		LS	2009	98
Bowen	703	3S	GA	Wet Limestone <sup>e</sup>	BR		LS	2008	98
Bowen	703	4S	GA	Wet Limestone <sup>e</sup>	BR		LS	2008	98
Brandon Shores	602	1	MD	Wet Limestone	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>n</sup>	95 <sup>e</sup>
Brandon Shores	602	2	MD	Wet Limestone	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>n</sup>	95 <sup>e</sup>
Brayton Point	1619	1	MA	Dry Lime	SD <sup>e</sup>		LI <sup>e</sup>	2008 <sup>m</sup>	90 <sup>m</sup>
Brayton Point	1619	2	MA	Dry Lime	SD <sup>e</sup>		LI <sup>e</sup>	2008 <sup>m</sup>	90 <sup>m</sup>
Bruce Mansfield	6094	1	PA	Wet Lime	VE		LI	1976	95
Bruce Mansfield	6094	2	PA	Wet Lime	VE		LI	1977	95
Bruce Mansfield	6094	3	PA	Wet Lime	SP		LI	1980	95
Brunner Island	3140	1	PA	Wet Limestone <sup>e</sup>	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	97 <sup>e</sup>
Brunner Island	3140	2	PA	Wet Limestone <sup>e</sup>	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	97 <sup>e</sup>
Bull Run	3396	1	TN	Wet Limestone	DCFS <sup>e</sup>		LS	2008	98
C D McIntosh Jr Power Plant	676	3	FL	Wet Limestone	SP		LS	1982	85
Cane Run	1363	4	KY	Wet Lime	SP		LI	1976	85
Cane Run	1363	5	KY	Wet Lime	SP		LI	1978	85
Cane Run	1363	6	KY	Dual Alkali <sup>f</sup>	TR		LI	1979	90
Cardinal	2828	1	OH	Wet Limestone	BR		LS	2008	98
Cardinal	2828	2	OH	Wet Limestone	BR		LS	2007	98
Cayuga	1001	1	IN	Wet Limestone	TR <sup>m</sup>		LS	2008	97
Cayuga	1001	2	IN	Wet Limestone	TR <sup>m</sup>		LS	2008	97
Centralia	3845	1	WA	Wet Limestone	SP		LS	2002	91
Centralia	3845	2	WA	Wet Limestone	SP		LS	2001	91
Charles R Lowman <sup>d</sup>	56	1-2	AL	Wet Limestone	BR <sup>e</sup>		LS	2007 <sup>h</sup>	98
Charles R Lowman	56	3	AL	Wet Limestone	SP	TR	LS	1980	85
Cherokee	469	1	CO	Sodium Based	DSI <sup>n</sup>		SC	1998	50
Cherokee	469	2	CO	Sodium Based	DSI <sup>n</sup>		SC	2003	50

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
Boswell Energy Center	1893	3	365	N	N	HI	SS <sup>e</sup>	Forced <sup>e</sup>
Boswell Energy Center	1893	AQCS2	558	Y	Y	AL	RLCS <sup>e</sup>	NR
Bowen	703	1S	806	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Bowen	703	2S	789	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Bowen	703	3S	952	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Bowen	703	4S	952	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Brandon Shores	602	1	685	NR	NR	SI	TL <sup>j</sup>	NR
Brandon Shores	602	2	685	NR	NR	SI	TL <sup>j</sup>	NR
Brayton Point	1619	1	241	NR	NR	SI	CS <sup>m</sup>	NA
Brayton Point	1619	2	241	NR	NR	SI	CS <sup>m</sup>	NA
Bruce Mansfield	6094	1	914	N	N	MX	FRCS <sup>f</sup>	Inhibited <sup>o</sup>
Bruce Mansfield	6094	2	914	N	N	MX	FRCS <sup>f</sup>	Inhibited <sup>o</sup>
Bruce Mansfield	6094	3	914	N	Y	KE	FRCS <sup>f</sup>	Inhibited <sup>o</sup>
Brunner Island	3140	1	769	NR	NR	SI	TL <sup>j</sup>	Forced <sup>e</sup>
Brunner Island	3140	2	790	NR	NR	SI	TL <sup>j</sup>	Forced <sup>e</sup>
Bull Run	3396	1	950	N	N	MHI/AV	NR	NR
C D McIntosh Jr Power Plant	676	3	364	Y	N	BW	FRCS <sup>f</sup>	Natural <sup>e</sup>
Cane Run	1363	4	163	N	N	AM	CO <sup>f</sup>	NR
Cane Run	1363	5	209	N	N	AL	SS <sup>f</sup>	NR
Cane Run	1363	6	272	N	N	AL	SS <sup>f</sup>	NR
Cardinal	2828	1	615	N	N	CH	NR	NR
Cardinal	2828	2	615	N	N	CH	NR	NR
Cayuga	1001	1	531	N	N	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Cayuga	1001	2	531	N	N	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Centralia	3845	1	730	Y	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Centralia	3845	2	730	Y	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Charles R Lowman <sup>d</sup>	56	1-2	302	Y	N	CH	NR	NR
Charles R Lowman	56	3	236	Y	N	AL	FRCS <sup>e</sup>	NR
Cherokee	469	1	125	N	Y	OT	NA	NA
Cherokee	469	2	125	N	N	OT	NA	NA



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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
Cherokee	469	3	CO	Dry Lime	SD		LA	2002	85
Cherokee	469	4A	CO	Dry Lime	SD		LA	2003	85
Chesterfield Power Station	3797	6	VA	Wet Limestone	TR <sup>e</sup>		LS	2008	97
Cheswick	8226	1	PA	Wet Limestone <sup>n</sup>	TR <sup>e</sup>		LS <sup>e</sup>	2010 <sup>n</sup>	98 <sup>n</sup>
Cholla	113	1	AZ	Wet Lime	SP <sup>j</sup>		LI	1973 <sup>i</sup>	90
Cholla <sup>m</sup>	113	2	AZ	Wet Lime	VE		LI	1978	90
Cholla	113	3	AZ	Wet Lime	SP <sup>e</sup>		LI <sup>b</sup>	2009 <sup>e</sup>	94
Cholla	113	4	AZ	Wet Lime	SP		LI	2008	94
Clover Power Station	7213	1	VA	Wet Limestone	SP		LS	1995	94
Clover Power Station	7213	2	VA	Wet Limestone	SP		LS	1996	94
Coal Creek	6030	1	ND	Wet Lime <sup>e</sup>	SP		LI	1979	95
Coal Creek	6030	2	ND	Wet Lime <sup>e</sup>	SP		LI	1981	95
Coffeen	861	1	IL	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	99 <sup>e</sup>
Coffeen	861	2	IL	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2010 <sup>e</sup>	99 <sup>e</sup>
Cogentrix-Hopewell	10377	FGD1A	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Hopewell	10377	FGD1B	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Hopewell	10377	FGD1C	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Hopewell	10377	FGD2A	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Hopewell	10377	FGD2B	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Hopewell	10377	FGD2C	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Portsmouth	10071	FGD1A	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Portsmouth	10071	FGD1B	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Portsmouth	10071	FGD1C	VA	Dry Lime	SD		LF	2008	90
Cogentrix-Portsmouth	10071	FGD2A	VA	Dry Lime	SD		LF	2007	90
Cogentrix-Portsmouth	10071	FGD2B	VA	Dry Lime	SD		LF	2007	90
Cogentrix-Portsmouth	10071	FGD2C	VA	Dry Lime	SD		LF	2007	90
Coleman <sup>d</sup>	1381	C	KY	Wet Limestone <sup>e</sup>	TR		LS	2006	95
Colstrip	6076	1	MT	Wet Lime	VE		LA	1975	58.8
Colstrip	6076	2	MT	Wet Lime	VE		LA	1976	58.8
Colstrip	6076	3	MT	Wet Lime	VE		LA	1984	95

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Construction	Oxidation Mode
Cherokee	469	3	171	N	N	BW	CS <sup>m</sup>	NA
Cherokee	469	4A	381	N	N	BW	CS <sup>m</sup>	NA
Chesterfield Power Station	3797	6	694	N	N	SI	TL <sup>j</sup>	NR
Cheswick	8226	1	637	NR	NR	SI	SS <sup>e</sup>	Forced <sup>n</sup>
Cholla	113	1	114	N	N	HRC	NR	NR
Cholla <sup>m</sup>	113	2	289	N	Y	HRC	NR	NR
Cholla	113	3	289	NR	NR	BPE	SS <sup>e</sup>	Inhibited <sup>e</sup>
Cholla	113	4	414	N	N	BPE	SS <sup>e</sup>	Inhibited <sup>e</sup>
Clover Power Station	7213	1	424	Y	Y	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Clover Power Station	7213	2	424	Y	Y	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Coal Creek	6030	1	605	Y	N	AL	SS <sup>k</sup>	Natural <sup>k</sup>
Coal Creek	6030	2	605	Y	N	AL	SS <sup>k</sup>	Natural <sup>k</sup>
Coffeen	861	1	389	NR	NR	HI	FRCS <sup>e</sup>	Forced <sup>e</sup>
Coffeen	861	2	617	NR	NR	HI	FRCS <sup>e</sup>	Forced <sup>e</sup>
Cogentrix-Hopewell	10377	FGD1A	57 <sup>p</sup>	N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Hopewell	10377	FGD1B		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Hopewell	10377	FGD1C		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Hopewell	10377	FGD2A	57 <sup>p</sup>	N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Hopewell	10377	FGD2B		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Hopewell	10377	FGD2C		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Portsmouth	10071	FGD1A	57 <sup>p</sup>	N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Portsmouth	10071	FGD1B		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Portsmouth	10071	FGD1C		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Portsmouth	10071	FGD2A	57 <sup>p</sup>	N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Portsmouth	10071	FGD2B		N	N	HRC	CS <sup>m</sup>	NA
Cogentrix-Portsmouth	10071	FGD2C		N	N	HRC	CS <sup>m</sup>	NA
Coleman <sup>d</sup>	1381	C	602	Y	N	SI	SS <sup>m</sup>	NR
Colstrip	6076	1	358	N	N	AL	FRCS <sup>f</sup>	NR
Colstrip	6076	2	358	N	N	AL	FRCS <sup>f</sup>	NR
Colstrip	6076	3	778	N	Y	OT	SS <sup>m</sup>	NR

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
Colstrip	6076	4	MT	Wet Lime	VE		LA	1986	95
Comanche (470)	470	1	CO	Dry Lime	SD		LA	2008	94
Comanche (470)	470	2	CO	Dry Lime	SD		LA	2008	94
Comanche (470)	470	3	CO	Dry Lime	SD		LA	2008	94
Conemaugh	3118	1	PA	Wet Limestone	SP		LS	1994	95
Conemaugh	3118	2	PA	Wet Limestone	SP		LS	1995	95
Conesville	2840	4	OH	Wet Limestone <sup>e</sup>	BR		LS	2009	98
Conesville	2840	5	OH	Wet Lime <sup>f</sup>	SP		LI	1977	89.7
Conesville	2840	6	OH	Wet Lime <sup>f</sup>	SP		LI	1977	89.7
Cope Station	7210	COP1	SC	Dry Lime	SD		LI	1996	95
Coronado Generating Station	6177	FGD1	AZ	Wet Limestone	SP		LS	1979	82.5
Coronado Generating Station	6177	FGD2	AZ	Wet Limestone	SP		LS	1980	82.5
Coyote	8222	FGD1	ND	Dry Lime	SD		LA	1981	70
Craig	6021	C1	CO	Wet Limestone	SP		LS	1980	95
Craig	6021	C2	CO	Wet Limestone	SP		LS	1979	95
Craig	6021	C3	CO	Dry Lime	SD		LI	1984	85
Crist Electric Generating Plant	641	1	FL	Wet Limestone	BR		LS	2009	95
Cromby	3159	1	PA	Magnesium Oxide	SP		MO	1982	95
Cross	130	1	SC	Wet Limestone	SP		LS	1995	90
Cross	130	2	SC	Wet Limestone	SP		LS	1983	81.4
Cross	130	3	SC	Wet Limestone	SP		LS	2007	97
Cross	130	4	SC	Wet Limestone	SP		LS	2008	97
Crystal River	628	4	FL	Wet Limestone	TR <sup>m</sup>		LS <sup>m</sup>	2010 <sup>a</sup>	97 <sup>m</sup>
Crystal River	628	5	FL	Wet Limestone	TR <sup>m</sup>		LS <sup>m</sup>	2009 <sup>a</sup>	97 <sup>m</sup>
Cumberland	3399	1	TN	Wet Limestone	SP		LS	1995	95
Cumberland	3399	2	TN	Wet Limestone	SP		LS	1995	95
Curtis H. Stanton Energy Center	564	1	FL	Wet Limestone <sup>e</sup>	SP		LS	1987	90
Curtis H. Stanton Energy Center	564	2	FL	Wet Limestone <sup>e</sup>	SP		LS	1996	95
D B Wilson	6823	W1	KY	Wet Limestone	SP		LS	1984	90
Dallman	963	31-32	IL	Wet Limestone	SP <sup>m</sup>		LS	2001	95

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
Colstrip	6076	4	778	N	Y	OT	SS <sup>m</sup>	NR
Comanche (470)	470	1	383	N	N	BW	CS <sup>m</sup>	NA
Comanche (470)	470	2	396	N	N	BW	CS <sup>m</sup>	NA
Comanche (470)	470	3	857 <sup>i</sup>	N	N	BW	CS <sup>m</sup>	NA
Conemaugh	3118	1	936	N	N	AL	TL <sup>j</sup>	Forced <sup>e</sup>
Conemaugh	3118	2	936	N	N	AL	TL <sup>j</sup>	Forced <sup>e</sup>
Conesville	2840	4	842	N	N	CH	NR	NR
Conesville	2840	5	444	Y	N	SI	RLCS <sup>f</sup>	NR
Conesville	2840	6	444	Y	N	SI	RLCS <sup>f</sup>	NR
Cope Station	7210	COP1	417	N	N	AL	CS <sup>m</sup>	NA
Coronado Generating Station	6177	FGD1	411	Y	Y	KE	FRCS <sup>f</sup>	NR
Coronado Generating Station	6177	FGD2	411	Y	Y	KE	FRCS <sup>f</sup>	NR
Coyote	8222	FGD1	450	N	N	AL	CS <sup>f</sup>	NA
Craig	6021	C1	446	N	Y	AL	RLCS <sup>e</sup>	NR
Craig	6021	C2	446	N	Y	AL	RLCS <sup>e</sup>	NR
Craig	6021	C3	446	Y	Y	BW	CS <sup>m</sup>	NA
Crist Electric Generating Plant	641	1	1135	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Cromby	3159	1	188	Y	Y	AL	NR	NR
Cross	130	1	591	N	Y	MX	NR	Forced <sup>k</sup>
Cross	130	2	556	N	Y	AL	RLCS <sup>e</sup>	Forced <sup>e</sup>
Cross	130	3	591	N	N	BPE	TL <sup>j</sup>	Forced <sup>e</sup>
Cross	130	4	652	N	N	BPE	TL <sup>j</sup>	Forced <sup>e</sup>
Crystal River	628	4	739	NR	NR	BW <sup>m</sup>	TL <sup>j</sup>	Forced <sup>m</sup>
Crystal River	628	4	739	NR	NR	BW <sup>m</sup>	TL <sup>j</sup>	Forced <sup>m</sup>
Cumberland	3399	1	1300	N	N	AL	RLCS <sup>e</sup>	Forced <sup>e</sup>
Cumberland	3399	2	1300	N	N	AL	RLCS <sup>e</sup>	Forced <sup>e</sup>
Curtis H. Stanton Energy Center	564	1	465	Y	Y	AL	RLCS <sup>e</sup>	Forced <sup>e</sup>
Curtis H. Stanton Energy Center	564	2	465	Y	Y	AL	RLCS <sup>e</sup>	Forced <sup>e</sup>
D B Wilson	6823	W1	566	N	Y	KE	TL <sup>m</sup>	NR
Dallman	963	31-32	180	Y	N	OT	SS <sup>m</sup>	NR

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
Dallman	963	33	IL	Wet Limestone	TR <sup>m</sup>	SP	LS	1980	95
Dallman	963	41	IL	Wet Limestone	TR <sup>e</sup>		LS	2009	98
Dave Johnston	4158	SC44	WY	Other	VE		LI	1972	60 <sup>f</sup>
Deerhaven	663	2	FL	Dry Lime	CD <sup>e</sup>		LI <sup>e</sup>	2009 <sup>e</sup>	97 <sup>e</sup>
Dolet Hills Power Station	51	1	LA	Wet Limestone	SP		LS	1986	76
Duck Creek	6016	1	IL	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2009 <sup>e</sup>	99 <sup>e</sup>
E W Brown	1355	1-3	KY	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2010 <sup>e</sup>	98.5 <sup>e</sup>
East Bend	6018	2	KY	Wet Lime	TR <sup>m</sup>		LI	1981	99
Eddystone Generating Station	3161	1	PA	Magnesium Oxide	SP		MO	1982	92
Eddystone Generating Station	3161	2	PA	Magnesium Oxide	SP		MO	1982	92
Elm Road Generating Station	56068	1	WI	Wet Limestone <sup>e</sup>	SP		LS	2009	98 <sup>e</sup>
Elmer Smith	1374	FGD	KY	Wet Limestone	SP		LS	1994	96
Elmer Smith	1374	FGD	KY	Wet Limestone	SP		LS	1994	96
Elrama	3098	SCRB	PA	Wet Lime	VE		LI	1976	83
Endicott Generating	4259	1	MI	Wet Limestone <sup>e</sup>	SP		LS	1983	90
Escalante	87	1	NM	Wet Limestone	SP		LS	1984	95
F B Culley Generating Station <sup>d</sup>	1012	2-3	IN	Wet Limestone	SP		LS	1995	95
Fort Martin Power Station <sup>d</sup>	3943	1	WV	Wet Limestone	SP <sup>n</sup>		LS <sup>e</sup>	2009 <sup>e</sup>	98 <sup>e</sup>
Fort Martin Power Station <sup>d</sup>	3943	2	WV	Wet Limestone	SP <sup>n</sup>		LS <sup>e</sup>	2009 <sup>e</sup>	98 <sup>e</sup>
Four Corners Steam Elec Station	2442	1	NM	Wet Lime	VE		LI <sup>n</sup>	1972	94
Four Corners Steam Elec Station	2442	2	NM	Wet Lime	VE		LI <sup>n</sup>	1972	94
Four Corners Steam Elec Station	2442	3	NM	Wet Lime	VE		LI <sup>n</sup>	1972	92
Four Corners Steam Elec Station	2442	4	NM	Wet Lime	TR		LI <sup>e</sup>	1985	92
Four Corners Steam Elec Station	2442	5	NM	Wet Lime	TR		LI <sup>e</sup>	1985	92
G G Allen	2718	1	NC	Wet Limestone	SP		LS	2009 <sup>d</sup>	95 <sup>e</sup>
G G Allen	2718	2	NC	Wet Limestone	SP		LS	2009 <sup>d</sup>	95 <sup>e</sup>
Gen J M Gavin	8102	1	OH	Wet Lime	TR <sup>m</sup>		LI	1994	95
Gen J M Gavin	8102	2	OH	Wet Lime	TR <sup>m</sup>		LI	1995	95
Genoa	4143	E3	WI	Dry Lime	SD		LA	2009 <sup>d</sup>	94.9
Ghent	1356	1	KY	Wet Limestone	SP		LS	1994	93

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Construction	Oxidation Mode
Dallman	963	33	207	N	N	HRC	SS <sup>f</sup>	Forced <sup>n</sup>
Dallman	963	41	280 <sup>j</sup>	N	N	SI	SS <sup>m</sup>	NR
Dave Johnston	4158	SC44	360	N	N	MX	FRCS <sup>f</sup>	NA
Deerhaven	663	2	251	NR	NR	BPE	CS <sup>m</sup>	NA
Dolet Hills Power Station	51	1	721	Y	N	SI	NR	NR
Duck Creek	6016	1	441	N	N	HI	FRCS <sup>e</sup>	Forced <sup>e</sup>
E W Brown	1355	1-3	669	NR	NR	BPE	TL <sup>j</sup>	Forced <sup>e</sup>
East Bend	6018	2	669	Y	N	BW	SS <sup>f</sup>	Natural <sup>e</sup>
Eddystone Generating Station	3161	1	354	Y	N	AL	SS <sup>f</sup>	NR
Eddystone Generating Station	3161	2	354	Y	Y	AM	SS <sup>f</sup>	NR
Elm Road Generating Station	56068	1	615 <sup>j</sup>	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Elmer Smith	1374	FGD	711	N	N	SI	SS <sup>m</sup>	NR
Elmer Smith	1374	FGD	711	N	N	SI	SS <sup>m</sup>	NR
Elrama	3098	SCRB	100	N	Y	MX	CO <sup>f</sup>	NR
Endicott Generating	4259	1	55	Y	N	BW	SS <sup>f</sup>	Forced <sup>e</sup>
Escalante	87	1	257	N	Y	AL	SS <sup>e</sup>	Forced <sup>e</sup>
F B Culley Generating Station <sup>d</sup>	1012	2-3	369	N	N	BPE	NI <sup>e</sup>	Forced <sup>e</sup>
Fort Martin Power Station <sup>d</sup>	3943	1	576	NR	NR	BW	NR	Forced <sup>e</sup>
Fort Martin Power Station <sup>d</sup>	3943	2	576	NR	NR	BW	NR	Forced <sup>e</sup>
Four Corners Steam Elec Station	2442	1	190	N	N	MX	FRCS <sup>f</sup>	NR
Four Corners Steam Elec Station	2442	2	190	N	N	MX	FRCS <sup>f</sup>	NR
Four Corners Steam Elec Station	2442	3	253	N	N	MX	FRCS <sup>f</sup>	NR
Four Corners Steam Elec Station	2442	4	818	Y	Y	BW	SS <sup>f</sup>	Inhibited <sup>e</sup>
Four Corners Steam Elec Station	2442	5	818	Y	Y	BW	SS <sup>f</sup>	Inhibited <sup>e</sup>
G G Allen	2718	1	605	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
G G Allen	2718	1	550	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Gen J M Gavin	8102	1	1300	N	Y	BW	SS <sup>m</sup>	NR
Gen J M Gavin	8102	2	1300	N	Y	BW	SS <sup>m</sup>	Natural <sup>e</sup>
Genoa	4143	E3	346	N	NR	AL	CS <sup>m</sup>	NA
Ghent	1356	1	557	N	Y	BPE	TL <sup>j</sup>	Forced <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
Ghent	1356	2	KY	Wet Limestone	SP		LS	2009	93
Ghent	1356	3	KY	Wet Limestone	SP		LS	2007	98.5
Ghent	1356	4	KY	Wet Limestone	SP		LS	2008	98.5
Gibson	6113	1	IN	Wet Limestone	TR <sup>m</sup>		LS	2007	97
Gibson	6113	2	IN	Wet Limestone	TR <sup>m</sup>		LS	2007	97
Gibson	6113	3	IN	Wet Limestone	TR <sup>m</sup>		LS	2006	97
Gibson	6113	4	IN	Wet Limestone	TR <sup>m</sup>		LS	1995	92
Gibson	6113	5	IN	Wet Limestone	SP		LS	1982	95
Gorgas	8	8-10	AL	Wet Limestone	DCFS <sup>e</sup>		LS	2007 <sup>h</sup>	95
Grand River Dam Authority	165	2	OK	Dry Lime	SD		LA	1986	85
H L Spurlock	6041	1	KY	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2009 <sup>e</sup>	96 <sup>e</sup>
H L Spurlock	6041	2	KY	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	97 <sup>e</sup>
H L Spurlock	6041	3	KY	Dry Lime <sup>e</sup>	CD <sup>m</sup>		LA <sup>m</sup>	2005 <sup>e</sup>	85 <sup>e</sup>
H L Spurlock	6041	4	KY	Dry Lime <sup>e</sup>	CD <sup>m</sup>		LA <sup>e</sup>	2008 <sup>e</sup>	85 <sup>e</sup>
H W Pirkey Power Plant	7902	1	TX	Wet Limestone	SP <sup>m</sup>		LS	1985	85
Hamilton Municipal Power Plant	2917	9	OH	Dry Lime	SD		LI	1999	83
Hardin Generating Station	55749	SDA-1	MT	Dry Lime	SD		LA	2006	92.3
Harding Street Station (EW Stout)	990	70	IN	Wet Limestone	DCFS <sup>e</sup>		LS	2007	98.1
Harrison Power Station	3944	1	WV	Wet Lime	SP		LI	1994	98
Harrison Power Station	3944	2	WV	Wet Lime	SP		LI	1994	98
Harrison Power Station	3944	3	WV	Wet Lime	SP		LI	1994	98
Hatfields Ferry Power Station	3179	1	PA	Wet Limestone	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	98 <sup>e</sup>
Hatfields Ferry Power Station	3179	2	PA	Wet Limestone	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	98 <sup>e</sup>
Hatfields Ferry Power Station	3179	3	PA	Wet Limestone	TR <sup>e</sup>		LS <sup>e</sup>	2009 <sup>d</sup>	98 <sup>e</sup>
Hawthorn	2079	5A	MO	Dry Lime	SD		LA	2001	94
Hayden	525	H1	CO	Dry Lime	SD		LA	1998	85
Hayden	525	H2	CO	Dry Lime	SD		LA	1999	85
HMP&L Station 2 <sup>d</sup>	1382	H1	KY	Wet Lime	TR		LI	1995	95
HMP&L Station 2 <sup>d</sup>	1382	H2	KY	Wet Lime	TR		LI	1995	95
Holcomb	108	SDA1	KS	Dry Lime	SD		LA	1983	80

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Construction	Oxidation Mode
Ghent	1356	2	556	N	Y	BW	NR	NR
Ghent	1356	3	557	N	N	BPE	TL <sup>j</sup>	Forced <sup>e</sup>
Ghent	1356	4	556	N	N	BPE	TL <sup>j</sup>	Forced <sup>e</sup>
Gibson	6113	1	668	N	N	BW	NR	Forced <sup>e</sup>
Gibson	6113	2	668	N	N	BW	NR	Forced <sup>e</sup>
Gibson	6113	3	668	N	N	BW	NR	Forced <sup>e</sup>
Gibson	6113	4	668	Y	N	BW	NR	Inhibited <sup>e</sup>
Gibson	6113	5	668	Y	N	KE	SS <sup>m</sup>	NR
Gorgas	8	8-10	1167	Y	N	MHI/AV	TL <sup>j</sup>	Forced <sup>e</sup>
Grand River Dam Authority	165	2	520	Y	Y	AL	CS <sup>f</sup>	NA
H L Spurlock	6041	1	358	NR	NR	AL	SS <sup>e</sup>	Forced <sup>e</sup>
H L Spurlock	6041	2	592	Y	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
H L Spurlock	6041	3	329	NR	NR	AL	CS <sup>m</sup>	NA
H L Spurlock	6041	4	329.4 <sup>i</sup>	NR	NR	AL	CS <sup>m</sup>	NA
H W Pirkey Power Plant	7902	1	721	Y	N	SI	FRCS <sup>f</sup>	NR
Hamilton Municipal Power Plant	2917	9	51	N	N	AP	CS <sup>m</sup>	NA
Hardin Generating Station	55749	SDA-1	116	N	N	HRC	CS <sup>m</sup>	NA
Harding Street Station (EW Stout)	990	70	471	Y	N	MHI/AV	NR	NR
Harrison Power Station	3944	1	684	Y	N	MX	SS <sup>m</sup>	NR
Harrison Power Station	3944	2	684	Y	N	MX	SS <sup>m</sup>	NR
Harrison Power Station	3944	3	684	Y	N	MX	SS <sup>m</sup>	NR
Hatfields Ferry Power Station	3179	1	576	NR	NR	BW	NR	Forced <sup>e</sup>
Hatfields Ferry Power Station	3179	2	576	NR	NR	BW	NR	Forced <sup>e</sup>
Hatfields Ferry Power Station	3179	3	576	NR	NR	BW	NR	Forced <sup>e</sup>
Hawthorn	2079	5A	594	N	N	BW	CS <sup>m</sup>	NA
Hayden	525	H1	190	N	N	BW	CS <sup>m</sup>	NA
Hayden	525	H2	275	N	N	BW	CS <sup>m</sup>	NA
HMP&L Station 2 <sup>d</sup>	1382	H1	200	Y	N	SI	SS <sup>m</sup>	NR
HMP&L Station 2 <sup>d</sup>	1382	H2	205	Y	N	SI	SS <sup>m</sup>	NR
Holcomb	108	SDA1	349	N	N	BW	CS <sup>m</sup>	NA



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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber		Sorbent	In-Service	Design SO <sub>2</sub>
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>			Type I <sup>b</sup>	Type II <sup>b</sup>	Type <sup>b</sup>	Year <sup>b</sup>	Removal Efficiency <sup>b</sup>
Homer City	3122	3	PA	Wet Limestone	SP		LS	2001	95
Hopewell Power Station	10771	1	VA	Dry Lime	SD		LA	1992	92
Hopewell Power Station	10771	2	VA	Dry Lime	SD		LA	1992	92
Hunter	6165	1	UT	Wet Lime	SP		LI	1978	80
Hunter	6165	2	UT	Wet Lime	SP		LI	1980	80
Hunter	6165	3	UT	Wet Lime	SP		LI <sup>e</sup>	1983	90
Huntington	8069	1	UT	Wet Lime	SP		LI	1978	80
Huntington	8069	2	UT	Wet Lime	SP		LI	2006	95.6 <sup>e</sup>
Iatan	6065	2	MO	Wet Limestone <sup>e</sup>	SP <sup>e</sup>		LS <sup>e</sup>	2008 <sup>e</sup>	98
Intermountain	6481	1CCC	UT	Wet Limestone	SP		LS	1986	90
Intermountain	6481	2CCC	UT	Wet Limestone	SP		LS	1987	90
J B Sims	1825	3	MI	Wet Lime	TR	SP	LI	1983	90
J K Spruce	7097	FGD1	TX	Wet Limestone	SP		LS	1992	70
J M Stuart	2850	1	OH	Wet Limestone <sup>e</sup>	BR		LS	2008	97
J M Stuart	2850	2	OH	Wet Limestone <sup>e</sup>	BR		LS	2008	97
J M Stuart	2850	3	OH	Wet Limestone <sup>e</sup>	BR		LS	2008	97
J M Stuart	2850	4	OH	Wet Limestone <sup>e</sup>	BR		LS	2008	97
James H Miller Jr	6002	2	AL	Wet Limestone	DCFS <sup>e</sup>		LS	2010	95
James H Miller Jr	6002	3	AL	Wet Limestone	DCFS <sup>e</sup>		LS	2009	95
James H Miller Jr	6002	4	AL	Wet Limestone	DCFS <sup>e</sup>		LS	2010	95
Jeffrey Energy Center	6068	1	KS	Wet Limestone	SP		LS	2009	98
Jeffrey Energy Center	6068	2	KS	Wet Limestone	SP		LS	2009 <sup>d</sup>	98
Jeffrey Energy Center	6068	3	KS	Wet Limestone	SP		LS	2009	98
Jim Bridger	8066	SC71	WY	Wet Sodium Based	TR		SL	1990	86.4
Jim Bridger	8066	SC72	WY	Wet Sodium Based	TR		SL	1986	86.4
Jim Bridger	8066	SC73	WY	Wet Sodium Based	TR		SL	1988	86.4
Jim Bridger	8066	SC74	WY	Wet Sodium Based <sup>e</sup>	TR		SL	1979	91
John E Amos	3935	3	WV	Wet Limestone	TR		LS	2009	98
Keystone	3136	FGD1	PA	Wet Limestone <sup>e</sup>	TR <sup>e</sup>		LS	2009	98
Keystone	3136	FGD2	PA	Wet Limestone <sup>e</sup>	TR <sup>e</sup>		LS	2009	98

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Construction	Oxidation Mode
Homer City	3122	3	692	N	N	AL	CO <sup>e</sup>	Forced <sup>e</sup>
Hopewell Power Station	10771	1	71 <sup>p</sup>	N	N	AL	CS <sup>m</sup>	NA
Hopewell Power Station	10771	2		N	N	AL	CS <sup>m</sup>	NA
Hunter	6165	1	488	N	N	MX	FRCS <sup>f</sup>	NR
Hunter	6165	2	488	N	N	MX	FRCS <sup>f</sup>	NR
Hunter	6165	3	496	N	N	MX	NR	NR
Huntington	8069	1	498	Y	Y	MX	FRCS <sup>f</sup>	Forced <sup>k</sup>
Huntington	8069	2	498	Y	Y	BPE	SS <sup>e</sup>	NR
Iatan	6065	2	726	N	NR	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Intermountain	6481	1CCC	820	N	N	MX	RLCS <sup>f</sup>	NR
Intermountain	6481	2CCC	820	N	Y	MX	NR	NR
J B Sims	1825	3	80	N	Y	BW	SS <sup>f</sup>	Forced <sup>e</sup>
J K Spruce	7097	FGD1	566	N	Y	AL	SS <sup>e</sup>	Forced <sup>e</sup>
J M Stuart	2850	1	610	Y	N	CH	NR	NR
J M Stuart	2850	2	610	Y	N	CH	NR	NR
J M Stuart	2850	3	610	Y	N	CH	NR	NR
J M Stuart	2850	4	610	Y	N	CH	NR	NR
James H Miller Jr	6002	2	706	Y	N	MHI/AV	TL <sup>l</sup>	Forced <sup>e</sup>
James H Miller Jr	6002	3	706	Y	N	MHI/AV	TL <sup>l</sup>	Forced <sup>e</sup>
James H Miller Jr	6002	4	706	Y	N	MHI/AV	TL <sup>l</sup>	Forced <sup>e</sup>
Jeffrey Energy Center	6068	1	720	Y	N	AL	SS <sup>e</sup>	NR
Jeffrey Energy Center	6068	2	720	Y	N	AL	SS <sup>e</sup>	NR
Jeffrey Energy Center	6068	3	720	Y	N	AL	SS <sup>e</sup>	NR
Jim Bridger	8066	SC71	578	Y	N	BW	NR	Forced <sup>e</sup>
Jim Bridger	8066	SC72	578	Y	N	BW	SS <sup>f</sup>	Forced <sup>e</sup>
Jim Bridger	8066	SC73	578	Y	N	BW	NR	Forced <sup>e</sup>
Jim Bridger	8066	SC74	584	Y	N	SI	RLCS <sup>f</sup>	NR
John E Amos	3935	3	1300	N	N	BW	NR	Forced <sup>e</sup>
Keystone	3136	FGD1	936	N	N	SI	SS <sup>e</sup>	NR
Keystone	3136	FGD2	936	N	N	SI	SS <sup>e</sup>	NR

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber	Absorber	Sorbent	In-Service	Design SO <sub>2</sub>
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>			Type I <sup>b</sup>	Type II <sup>b</sup>	Type <sup>b</sup>	Year <sup>b</sup>	Removal Efficiency <sup>b</sup>
Killen Station	6031	2	OH	Wet Limestone <sup>e</sup>	BR		LS	2007	97
La Cygne	1241	1	KS	Wet Limestone	TR <sup>m</sup>		LS	1973	80
Laramie River	6204	1	WY	Wet Limestone	SP		LS	1980	90
Laramie River	6204	2	WY	Wet Limestone	SP		LS	1981	90
Laramie River	6204	3	WY	Dry Lime	SD		LA	1984	85
Lawrence Energy Center	1250	4N & 4S	KS	Wet Limestone	VE	SP	LS	1969	73
Lawrence Energy Center	1250	5	KS	Wet Limestone	VE	SP	LS	1971	52
Lewis & Clark	6089	1	MT	Wet Lime	SP		LA	1975	81
Limestone	298	FGD1	TX	Wet Limestone	SP		LS	1985	90
Limestone	298	FGD2	TX	Wet Limestone	SP		LS	1986	90
Louisa	6664	1	IA	Dry Lime	SD		LA	2007	90
Marion	976	4	IL	Wet Limestone	TR <sup>m</sup>		LS	1979	89.4
Marshall	2727	1-2	NC	Wet Limestone <sup>e</sup>	SP		LS	2007	95 <sup>e</sup>
Marshall	2727	3	NC	Wet Limestone <sup>e</sup>	SP		LS	2007	95 <sup>e</sup>
Marshall	2727	4	NC	Wet Limestone <sup>e</sup>	SP		LS	2006	95 <sup>e</sup>
Martin Lake	6146	1	TX	Wet Limestone	TR <sup>m</sup>		LS	1977	95
Martin Lake	6146	2	TX	Wet Limestone	TR <sup>m</sup>		LS	1978	95
Martin Lake	6146	3	TX	Wet Limestone	TR <sup>m</sup>		LS	1979	95
Mecklenburg Power Station	52007	FGD1	VA	Dry Lime	SD <sup>e</sup>		LA	1992	92
Mecklenburg Power Station	52007	FGD2	VA	Dry Lime	SD <sup>e</sup>		LA	1992	92
Merom	6213	1FGD	IN	Wet Limestone	PA <sup>m</sup>		LS	1983	90
Merom	6213	2FGD	IN	Wet Limestone	PA <sup>m</sup>		LS	1982	90
Miami Fort Generating Station	2832	7	OH	Wet Limestone	TR <sup>m</sup>		LS	2007	97
Miami Fort Generating Station	2832	8	OH	Wet Limestone	TR <sup>m</sup>		LS	2007	97
Mill Creek	1364	1	KY	Wet Limestone	SP		LS	1981	90
Mill Creek	1364	2	KY	Wet Limestone	SP		LS	1980	90
Mill Creek	1364	3	KY	Wet Limestone	SP		LS	1985	90
Mill Creek	1364	4	KY	Wet Limestone	SP		LS	1982	90
Milton R Young	2823	FGD2	ND	Wet Lime <sup>m</sup>	SP		LA	1988 <sup>e</sup>	78.9
Mirant Morgantown	1573	1	MD	Wet Limestone <sup>e</sup>	SP		LS	2009	98

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
Killen Station	6031	2	661	N	N	CH	NR	NR
La Cygne	1241	1	893	Y	N	BW	SS <sup>f</sup>	Natural <sup>e</sup>
Laramie River	6204	1	570	Y	Y	HRC	SS <sup>f</sup>	NR
Laramie River	6204	2	570	Y	Y	HRC	SS <sup>f</sup>	NR
Laramie River	6204	3	570	N	Y	BW	CS <sup>f</sup>	NA
Lawrence Energy Center	1250	4N & 4S	114	N	N	AL	SS <sup>e</sup>	NR
Lawrence Energy Center	1250	5	403	N	N	AL	SS <sup>e</sup>	NR
Lewis & Clark	6089	1	50	N	N	HRC	NR	NR
Limestone	298	FGD1	893	Y	Y	AL	NI <sup>e</sup>	Forced <sup>e</sup>
Limestone	298	FGD2	957	Y	Y	AL	NI <sup>e</sup>	Forced <sup>e</sup>
Louisa	6664	1	812	Y	N	AL	CS <sup>m</sup>	NA
Marion	976	4	173	N	N	BW	FRCS <sup>f</sup>	Natural <sup>e</sup>
Marshall	2727	1-2	700	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Marshall	2727	3	648	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Marshall	2727	4	648	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Martin Lake	6146	1	793	Y	N	HRC	FRCS <sup>f</sup>	NR
Martin Lake	6146	2	793	Y	N	HRC	FRCS <sup>f</sup>	NR
Martin Lake	6146	3	793	Y	N	HRC	FRCS <sup>f</sup>	NR
Mecklenburg Power Station	52007	FGD1	70	N	N	AL	CS <sup>m</sup>	NA
Mecklenburg Power Station	52007	FGD2	70	N	N	AL	CS <sup>m</sup>	NA
Merom	6213	1FGD	540	Y	N	MHI	FRCS <sup>m</sup>	NR
Merom	6213	2FGD	540	Y	N	MHI	FRCS <sup>m</sup>	NR
Miami Fort Generating Station	2832	7	557	N	N	BW	NR	Forced <sup>e</sup>
Miami Fort Generating Station	2832	8	558	N	N	BW	NR	Forced <sup>e</sup>
Mill Creek	1364	1	356	N	N	AL	SS <sup>e</sup>	NR
Mill Creek	1364	2	356	N	N	AL	SS <sup>e</sup>	NR
Mill Creek	1364	3	463	N	N	AM	SS <sup>m</sup>	NR
Mill Creek	1364	4	544	N	N	AM	SS <sup>m</sup>	NR
Milton R Young	2823	FGD2	477	Y	N	AL	TL <sup>e</sup>	Forced <sup>e</sup>
Mirant Morgantown	1573	1	626	Y	N	BW	NR	Forced <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber		Sorbent	In-Service	Design SO <sub>2</sub>
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>			Type I <sup>b</sup>	Type II <sup>b</sup>		Year <sup>b</sup>	Removal Efficiency <sup>b</sup>
Mirant Morgantown	1573	2	MD	Wet Limestone <sup>e</sup>	SP		LS	2009	98
Mirant Potomac River <sup>d</sup>	3788	1	VA	Sodium Based <sup>n</sup>	DSI <sup>n</sup>		SC <sup>n</sup>	2008 <sup>n</sup>	95 <sup>n</sup>
Mirant Potomac River <sup>d</sup>	3788	2	VA	Sodium Based <sup>n</sup>	DSI <sup>n</sup>		SC <sup>n</sup>	2008 <sup>n</sup>	95 <sup>n</sup>
Mirant Potomac River <sup>d</sup>	3788	3	VA	Sodium Based <sup>n</sup>	DSI <sup>n</sup>		SC <sup>n</sup>	2008 <sup>n</sup>	95 <sup>n</sup>
Mirant Potomac River <sup>d</sup>	3788	4	VA	Sodium Based <sup>n</sup>	DSI <sup>n</sup>		SC <sup>n</sup>	2008 <sup>n</sup>	95 <sup>n</sup>
Mirant Potomac River <sup>d</sup>	3788	5	VA	Sodium Based <sup>n</sup>	DSI <sup>n</sup>		SC <sup>n</sup>	2008 <sup>n</sup>	95 <sup>n</sup>
Mitchell (WV)	3948	1	WV	Wet Limestone	TR		LS	2007	98
Mitchell (WV)	3948	2	WV	Wet Limestone	TR		LS	2007	98
Mitchell Power Station	3181	33	PA	Wet Lime	SP		LI	1982	95
Monroe	1733	3	MI	Wet Limestone	TR <sup>m</sup>		LS	2009	97
Monroe	1733	4	MI	Wet Limestone	TR <sup>m</sup>		LS	2009	97
Monticello	6147	3	TX	Wet Limestone	SP	TR	LS	1978	95
Montour	3149	1	PA	Wet Limestone <sup>e</sup>	TR <sup>e</sup>		LS	2008	97
Montour	3149	2	PA	Wet Limestone <sup>e</sup>	TR <sup>e</sup>		LS	2008	97
Mount Storm Power Station	3954	1	WV	Wet Limestone	SP		LS	2002	95
Mount Storm Power Station	3954	2	WV	Wet Limestone	SP		LS	2002	95
Mount Storm Power Station	3954	3	WV	Wet Limestone	SP		LS	1995	93.5
Mountaineer (1301)	6264	1	WV	Wet Limestone	SP		LS	2007	98
Muscatine	1167	9	IA	Wet Limestone	SP		LS	1983	96
Naughton	4162	3	WY	Wet Sodium Based <sup>f</sup>	TR		SA <sup>e</sup>	1981	70
Navajo Generating Station	4941	1	AZ	Wet Limestone	SP		LS	1999	92
Navajo Generating Station	4941	2	AZ	Wet Limestone	SP		LS	1998	92
Navajo Generating Station	4941	3	AZ	Wet Limestone	SP		LS	1997	92
Nebraska City Station	6096	2	NE	Dry Lime	SD		LI	2009	95
Neil Simpson II	7504	2	WY	Dry Lime	CD <sup>l</sup>		LI <sup>l</sup>	1995 <sup>l</sup>	98 <sup>l</sup>
Niles <sup>d</sup>	2861	1	OH	Wet Limestone	SP		LS	1995	95 <sup>e</sup>
North Valmy	8224	2	NV	Dry Lime	SD		LI	1985	70
Northside	667	1	FL	Dry Lime	SD <sup>e</sup>		LF	2002	85
Northside	667	2	FL	Dry Lime	SD <sup>e</sup>		LF	2002	85
Oak Grove	6180	1	TX	Wet Limestone	SP	PA	LS	2009	98

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
Mirant Morgantown	1573	2	626	Y	N	BW	NR	Forced <sup>e</sup>
Mirant Potomac River <sup>d</sup>	3788	1	92	NR	NR	NR	NA	NA
Mirant Potomac River <sup>d</sup>	3788	2	92	NR	NR	NR	NA	NA
Mirant Potomac River <sup>d</sup>	3788	3	110	NR	NR	NR	NA	NA
Mirant Potomac River <sup>d</sup>	3788	4	110	NR	NR	NR	NA	NA
Mirant Potomac River <sup>d</sup>	3788	5	110	NR	NR	NR	NA	NA
Mitchell (WV)	3948	1	816	N	N	BW	NR	Forced <sup>e</sup>
Mitchell (WV)	3948	2	816	N	N	BW	NR	Forced <sup>e</sup>
Mitchell Power Station	3181	33	299	N	Y	MX	FRCS <sup>f</sup>	NR
Monroe	1733	3	823	N	N	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Monroe	1733	4	817	N	N	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Monticello	6147	3	793	Y	N	MX	FRCS <sup>f</sup>	NR
Montour	3149	1	806	N	N	SI	TL <sup>j</sup>	NR
Montour	3149	2	819	N	N	SI	TL <sup>j</sup>	NR
Mount Storm Power Station	3954	1	570	Y	N	MX	TL <sup>j</sup>	NR
Mount Storm Power Station	3954	2	570	Y	N	MX	TL <sup>j</sup>	NR
Mount Storm Power Station	3954	3	522	Y	N	MX	SS <sup>m</sup>	NR
Mountaineer (1301)	6264	1	1300	N	N	AL	SS <sup>e</sup>	Forced <sup>e</sup>
Muscatine	1167	9	176	Y	Y	HRC	SS <sup>f</sup>	NR
Naughton	4162	3	326	Y	N	SI	NR	NR
Navajo Generating Station	4941	1	803	Y	N	AL	NI <sup>e</sup>	Forced <sup>e</sup>
Navajo Generating Station	4941	2	803	Y	N	AL	NI <sup>e</sup>	Forced <sup>e</sup>
Navajo Generating Station	4941	3	803	Y	N	AL	NI <sup>e</sup>	Forced <sup>e</sup>
Nebraska City Station	6096	2	652	N	N	AL	CS <sup>m</sup>	NA
Neil Simpson II	7504	2	80	N	N	AD <sup>m</sup>	CS <sup>e</sup>	NA
Niles <sup>d</sup>	2861	1	139	Y	N	AL	FRCS <sup>e</sup>	Forced <sup>e</sup>
North Valmy	8224	2	290	Y	N	AL	CS <sup>m</sup>	NA
Northside	667	1	298	Y	N	SI	CS <sup>m</sup>	NA
Northside	667	2	298	Y	N	SI	CS <sup>m</sup>	NA
Oak Grove	6180	1	801 <sup>i</sup>	N	N	BPE	SS <sup>e</sup>	Forced <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
Oklahoma Power Station	127	1	TX	Wet Limestone	SP		LS	1986	86.8
Paradise	1378	1	KY	Wet Limestone	SP	VE <sup>e</sup>	LS	1983	84.2
Paradise	1378	2	KY	Wet Limestone	SP	VE <sup>e</sup>	LS	1983	84.2
Paradise	1378	3	KY	Wet Limestone	DCFS <sup>e</sup>		LS	2006	98 <sup>e</sup>
Petersburg	994	1	IN	Wet Limestone	SP		LS	1996	95
Petersburg	994	2	IN	Wet Limestone	SP		LS	1996	95
Petersburg	994	3	IN	Wet Limestone	TR		LS	1977	85
Petersburg	994	4	IN	Wet Limestone	SP		LS	1986	95
Pleasant Prairie	6170	1	WI	Wet Limestone	TR <sup>e</sup>		LS	2006	95
Pleasant Prairie	6170	2	WI	Wet Limestone	TR <sup>e</sup>		LS	2007	95
Pleasants Power Station	6004	1	WV	Wet Lime	TR		LI	1979	90
Pleasants Power Station	6004	2	WV	Wet Lime	TR		LI	1980	90
R D Green	6639	G1	KY	Wet Lime	SP		LI	1979	90
R D Green	6639	G2	KY	Wet Lime	SP		LI	1981	90
R D Morrow Senior Generating Plant	6061	1	MS	Wet Limestone	SP		LS	1978	52.7
R D Morrow Senior Generating Plant	6061	2	MS	Wet Limestone	SP		LS	1979	52.7
R M Schahfer Generating Station	6085	17	IN	Wet Limestone	TR <sup>m</sup>		LS	1983	90
R M Schahfer Generating Station	6085	18	IN	Wet Limestone	TR <sup>m</sup>		LS	1986	90
Rawhide Energy Station	6761	101	CO	Dry Lime	SD		LA	1984	80
Reid Gardner	2324	1	NV	Wet Sodium Based <sup>f</sup>	VE		SC	1974	90.5
Reid Gardner	2324	2	NV	Wet Sodium Based <sup>f</sup>	VE		SC	1974	90.5
Reid Gardner	2324	3	NV	Wet Sodium Based <sup>f</sup>	VE		SC	1976	90.5
Reid Gardner	2324	4	NV	Wet Sodium Based <sup>f</sup>	SP		SC	1983	85
Roxboro	2712	1	NC	Wet Limestone <sup>o</sup>	TR <sup>o</sup>		LS	2008	97 <sup>e</sup>
Roxboro	2712	2	NC	Wet Limestone <sup>o</sup>	TR <sup>o</sup>		LS	2008 <sup>g</sup>	97 <sup>e</sup>
Roxboro	2712	3	NC	Wet Limestone	TR <sup>o</sup>		LS	2008	97 <sup>e</sup>
Roxboro	2712	4	NC	Wet Limestone	TR <sup>o</sup>		LS	2008 <sup>g</sup>	97 <sup>e</sup>
Sam Seymour	6179	3	TX	Wet Limestone	SP		LS	1988	90
San Juan	2451	1	NM	Wet Limestone	TR <sup>m</sup>		LS	1998	90
San Juan	2451	2	NM	Wet Limestone	TR <sup>m</sup>		LS	1998	90 <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
Oklaunion Power Station	127	1	720	Y	Y	MX	NR	NR
Paradise	1378	1	704	N	Y	MX	SS <sup>f</sup>	NR
Paradise	1378	2	704	N	Y	MX	SS <sup>f</sup>	NR
Paradise	1378	3	1150	Y	NR	MHI/AV	NR	NR
Petersburg	994	1	253	Y	N	MX	SS <sup>m</sup>	NR
Petersburg	994	2	471	Y	N	MX	SS <sup>m</sup>	NR
Petersburg	994	3	574	Y	N	SI	RLCS <sup>f</sup>	NR
Petersburg	994	4	574	Y	N	HRC	NR	NR
Pleasant Prairie	6170	1	617	N	N	SI	SS <sup>e</sup>	Forced <sup>o</sup>
Pleasant Prairie	6170	2	617	N	N	SI	SS <sup>e</sup>	Forced <sup>o</sup>
Pleasants Power Station	6004	1	684	N	N	BW	RLCS <sup>f</sup>	Natural <sup>e</sup>
Pleasants Power Station	6004	2	684	N	N	BW	RLCS <sup>f</sup>	Natural <sup>e</sup>
R D Green	6639	G1	293	N	Y	AM	FRCS <sup>f</sup>	NR
R D Green	6639	G2	293	Y	N	AM	FRCS <sup>f</sup>	NR
R D Morrow Senior Generating Plant	6061	1	200	Y	N	RS	CO <sup>f</sup>	NR
R D Morrow Senior Generating Plant	6061	2	200	Y	N	RS	CO <sup>f</sup>	NR
R M Schahfer Generating Station	6085	17	424	N	Y	FMC	NR	NR
R M Schahfer Generating Station	6085	18	424	N	Y	FMC	NR	NR
Rawhide Energy Station	6761	101	294	Y	Y	BW	CS <sup>f</sup>	NA
Reid Gardner	2324	1	114	Y	N	AL	RLCS <sup>f</sup>	NR
Reid Gardner	2324	2	114	Y	N	AL	RLCS <sup>f</sup>	NR
Reid Gardner	2324	3	114	Y	N	AL	RLCS <sup>f</sup>	NR
Reid Gardner	2324	4	295	Y	Y	AL	NR	NR
Roxboro	2712	1	411	NR	NR	BW	NR	Forced <sup>e</sup>
Roxboro	2712	2	657	NR	NR	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Roxboro	2712	3	745	NR	NR	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Roxboro	2712	4	745	NR	NR	BW	TL <sup>j</sup>	Forced <sup>e</sup>
Sam Seymour	6179	3	460	Y	Y	AL	NR	NR
San Juan	2451	1	369	N	N	BW	NR	Forced <sup>e</sup>
San Juan	2451	2	369	N	N	BW	NR	Forced <sup>e</sup>



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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber	Absorber	Sorbent	In-Service	Design SO <sub>2</sub>
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>			Type I <sup>b</sup>	Type II <sup>b</sup>	Type <sup>b</sup>	Year <sup>b</sup>	Removal Efficiency <sup>b</sup>
San Juan	2451	3	NM	Wet Limestone	TR <sup>m</sup>		LS	1998	90
San Juan	2451	4	NM	Wet Limestone	TR <sup>m</sup>		LS	1998	90
San Miguel	6183	SM-1	TX	Wet Limestone	TR <sup>m</sup>		LS	1982	94.1
Sandow	6648	4	TX	Wet Limestone	SP		LS	1981	92
Sandow Station	52071	5A	TX	Dry Lime	CD		LS	2009	95.8
Sandow Station	52071	5B	TX	Dry Lime	CD		LS	2009	95.8
Seminole (136)	136	1	FL	Wet Limestone	SP		LS	1984	90
Seminole (136)	136	2	FL	Wet Limestone	SP		LS	1984	90
Seward	3130	FDA1	PA	Dry Lime <sup>e</sup>	CD <sup>m</sup>		LF	2004	95
Seward	3130	FDA2	PA	Dry Lime <sup>e</sup>	CD <sup>e</sup>		LF	2004	95
Sherburne County	6090	1	MN	Wet Limestone	SP <sup>e</sup>		AF	1976	50
Sherburne County	6090	2	MN	Wet Limestone	SP	VE	AF	1977	50
Sherburne County	6090	3	MN	Dry Lime	SD		LA	1987	72.3
Shiras	1843	3	MI	Dry Lime <sup>m</sup>	SD		LS	1983	80
Southampton Power Station	10774	1	VA	Dry Lime	SD		LA	1991	92
Southampton Power Station	10774	2	VA	Dry Lime	SD		LA	1991	92
Springerville Generating Station	8223	1	AZ	Dry Lime	SD		LA	1985	61.3
Springerville Generating Station	8223	2	AZ	Dry Lime	SD		LA	1990	61.3
Springerville Generating Station	8223	3	AZ	Dry Lime	SD		LI	2006	84.7
Springerville Generating Station	8223	4	AZ	Dry Lime	SD		LI	2009	84.7
St. Johns River Power	207	1	FL	Wet Limestone <sup>f</sup>	SP		LS	1987	90
St. Johns River Power	207	2	FL	Wet Limestone <sup>f</sup>	SP		LS	1988	90
Stanton	2824	10	ND	Dry Lime	SD		LI	1982	70
Taconite Harbor Energy Center	10075	FSI1	MN	Dry Lime <sup>m</sup>	DSI <sup>m</sup>		LI	2008	65
Taconite Harbor Energy Center	10075	FSI2	MN	Dry Lime <sup>m</sup>	DSI <sup>m</sup>		LI	2007	65
Trimble County	6071	1	KY	Wet Limestone	SP		LS	1990	90.7
TS Power Plant	56224	SCB600	NV	Dry Lime	SD		LA	2008	92
Valmont	477	5	CO	Dry Lime	SD		LA	2002	85
W A Parish	3470	FGD8	TX	Wet Limestone <sup>f</sup>	SP		LS	1982	85
W H Sammis	2866	6	OH	Wet Limestone <sup>m</sup>	TR <sup>m</sup>		LS <sup>e</sup>	2009 <sup>m</sup>	98 <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
San Juan	2451	3	555	N	N	BW	NR	Forced <sup>e</sup>
San Juan	2451	4	555	N	N	BW	NR	Forced <sup>e</sup>
San Miguel	6183	SM-1	410	N	N	BW	SS <sup>m</sup>	Inhibited <sup>e</sup>
Sadow	6648	4	591	Y	N	AL	SS <sup>e</sup>	NR
Sadow Station	52071	5A	661 <sup>i,p</sup>	N	N	AD	CS <sup>m</sup>	NA
Sadow Station	52071	5B		N	N	AD	CS <sup>m</sup>	NA
Seminole (136)	136	1	715	N	Y	AL	RLCS <sup>e</sup>	Natural <sup>e</sup>
Seminole (136)	136	2	715	N	Y	AL	RLCS <sup>e</sup>	Natural <sup>e</sup>
Seward	3130	FDA1	585 <sup>p</sup>	N	N	AL	CS <sup>m</sup>	NA
Seward	3130	FDA2		N	N	AL	CS <sup>m</sup>	NA
Sherburne County	6090	1	765	N	Y	AL	FRCS <sup>e</sup>	NR
Sherburne County	6090	2	765	N	Y	AL	FRCS <sup>e</sup>	NR
Sherburne County	6090	3	900	Y	Y	BW	CS <sup>m</sup>	NA
Shiras	1843	3	44	Y	N	MX	CS <sup>m</sup>	NA
Southampton Power Station	10774	1	71 <sup>p</sup>	N	N	AL	CS <sup>m</sup>	NA
Southampton Power Station	10774	2		N	N	AL	CS <sup>m</sup>	NA
Springerville Generating Station	8223	1	425	N	N	BW	CS <sup>m</sup>	NA
Springerville Generating Station	8223	2	425	N	N	BW	CS <sup>m</sup>	NA
Springerville Generating Station	8223	3	450	N	Y	AL	CS <sup>m</sup>	NA
Springerville Generating Station	8223	4	450 <sup>j</sup>	N	Y	AL	CS <sup>m</sup>	NA
St. Johns River Power	207	1	679	Y	Y	HRC	FRCS <sup>f</sup>	NR
St. Johns River Power	207	2	679	Y	Y	HRC	NR	NR
Stanton	2824	10	190	N	N	HRC	CS <sup>m</sup>	NA
Taconite Harbor Energy Center	10075	FSI1	84	Y	NR	OT	NA	NA
Taconite Harbor Energy Center	10075	FSI2	84	Y	NR	OT	NA	NA
Trimble County	6071	1	566	Y	Y	AL	SS <sup>e</sup>	Forced <sup>e</sup>
TS Power Plant	56224	SCB600	242	N	N	BW	CS <sup>m</sup>	NA
Valmont	477	5	192	N	N	BW	CS <sup>m</sup>	NA
W A Parish	3470	FGD8	615	N	N	MX	FRCS <sup>f</sup>	NR
W H Sammis	2866	6	680	NR	NR	BW	NR	Forced <sup>e</sup>

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Facility Name <sup>a</sup>	Plant Code		State <sup>a</sup>	Process Type <sup>a</sup>	Absorber Type I <sup>b</sup>	Absorber Type II <sup>b</sup>	Sorbent Type <sup>b</sup>	In-Service Year <sup>b</sup>	Design SO <sub>2</sub> Removal
	(ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>							Efficiency <sup>b</sup>
W H Sammis	2866	1-5	OH	Wet Limestone <sup>m</sup>	TR <sup>m</sup>		LS <sup>e</sup>	2010 <sup>a</sup>	98 <sup>e</sup>
W H Sammis	2866	7	OH	Wet Limestone <sup>m</sup>	TR <sup>m</sup>		LS <sup>e</sup>	2010 <sup>a</sup>	98 <sup>e</sup>
W H Zimmer Generating Station	6019	1	OH	Wet Lime	TR <sup>m</sup>		LI	1991	99
Walter Scott Jr. Energy Center	1082	3	IA	Dry Lime	SD		LA	2009	93.6
Walter Scott Jr. Energy Center	1082	4	IA	Dry Lime	SD		LA	2007	92
Wansley (6052)	6052	1	GA	Wet Limestone <sup>e</sup>	BR		LS	2008	98
Wansley (6052)	6052	2	GA	Wet Limestone <sup>e</sup>	BR		LS	2009	98
Weston	4078	4	WI	Dry Lime	SD		LA	2008	90
Widows Creek	50	7	AL	Wet Limestone	SP		LS	1981	83.4
Widows Creek	50	8	AL	Wet Limestone	DCFS <sup>e</sup>		LS	2003 <sup>e</sup>	96 <sup>e</sup>
Williams	3298	WIL1	SC	Wet Limestone	SP		LS	2009	96
Winyah	6249	1	SC	Wet Limestone	SP		LS <sup>e</sup>	2007	97
Winyah	6249	2	SC	Wet Limestone	SP		LS	2007	97
Winyah	6249	3	SC	Wet Limestone	SP		LS	1980	90
Winyah	6249	4	SC	Wet Limestone	SP		LS	1981	90.4
Wygen I	55479	3	WY	Dry Lime	SD <sup>m</sup>		LI	2003	89.9
Wygen II	56319	1	WY	Dry Lime	SD		LA	2008	90.4
Wyodak	6101	SC91	WY	Dry Lime	SD		LI	1986	75.2
Yates	728	Y1FG	GA	Wet Limestone <sup>e</sup>	BR		LS	1992	90

<sup>a</sup> This column is from the 2010 "Emissions" section of EPA's Clean Air Markets Division "Data and Maps" website

<sup>b</sup> This column is from 2008 EIA-860 data Schedules 6-G & 6-H

<sup>c</sup> This column is from 2008 EIA-860 data "Annual Electric Generator Report" Generator (Existing) File

<sup>d</sup> 2009 "Emissions" section of EPA's Clean Air Markets Division "Data and Maps" website

<sup>e</sup> Information is from respective vendor either from direct correspondence or from their website/publications

<sup>f</sup> DOE "Utility FGD Survey January - December 1989" Publication Number ORNL/M-2347

<sup>g</sup> 2008 "Emissions" section of EPA's Clean Air Markets Division "Data and Maps" website

<sup>h</sup> 2007 "Emissions" section of EPA's Clean Air Markets Division "Data and Maps" website

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Facility Name <sup>a</sup>	Plant Code (ORISPL) <sup>a</sup>	FGD ID <sup>b</sup>	Nameplate Capacity <sup>c</sup>	Provision for Bypass <sup>b</sup>	Incorporation of Spare Module <sup>b</sup>	Manufacturer <sup>b</sup>	Material of Constuction	Oxidation Mode
W H Sammis	2866	1-5	715	NR	NR	BW	NR	Forced <sup>e</sup>
W H Sammis	2866	7	680	NR	NR	BW	NR	Forced <sup>e</sup>
W H Zimmer Generating Station	6019	1	1426	Y	Y	BW	SS <sup>m</sup>	Forced <sup>e</sup>
Walter Scott Jr. Energy Center	1082	3	726	N	N	AL	CS <sup>m</sup>	NA
Walter Scott Jr. Energy Center	1082	4	923	N	N	BW	CS <sup>m</sup>	NA
Wansley (6052)	6052	1	952	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Wansley (6052)	6052	2	952	Y	NR	CH	FRP <sup>e</sup>	Forced <sup>e</sup>
Weston	4078	4	595	N	N	BW	CS <sup>m</sup>	NA
Widows Creek	50	7	575	Y	N	AL	SS <sup>e</sup>	Forced <sup>o</sup>
Widows Creek	50	8	550	Y	N	MHI/AV	SS <sup>m</sup>	Forced <sup>o</sup>
Williams	3298	WIL1	633	N	N	BPE	FRCS <sup>e</sup>	Forced <sup>e</sup>
Winyah	6249	1	315	N	N	SI	NR	NR
Winyah	6249	2	315	N	N	SI	NR	NR
Winyah	6249	3	315	N	N	BW	RLCS <sup>f</sup>	Natural <sup>e</sup>
Winyah	6249	4	315	N	N	AM	NR	NR
Wygen I	55479	3	88	N	N	BW	CS <sup>m</sup>	NA
Wygen II	56319	1	95	N	N	BW	CS <sup>m</sup>	NA
Wyodak	6101	SC91	362	Y	N	BW	CS <sup>m</sup>	NA
Yates	728	Y1FG	123	Y	N	CH	FRP <sup>e</sup>	Forced <sup>e</sup>

<sup>i</sup> 2008 EIA-860 data "Annual Electric Generator Report" Generator (Proposed) File

<sup>j</sup> Material information from Stebbins Manufacturing Installation List

<sup>k</sup> Upgrade by BPE according to BPE

<sup>l</sup> 2005 EIA-767 data Schedule 8-A & 8-B

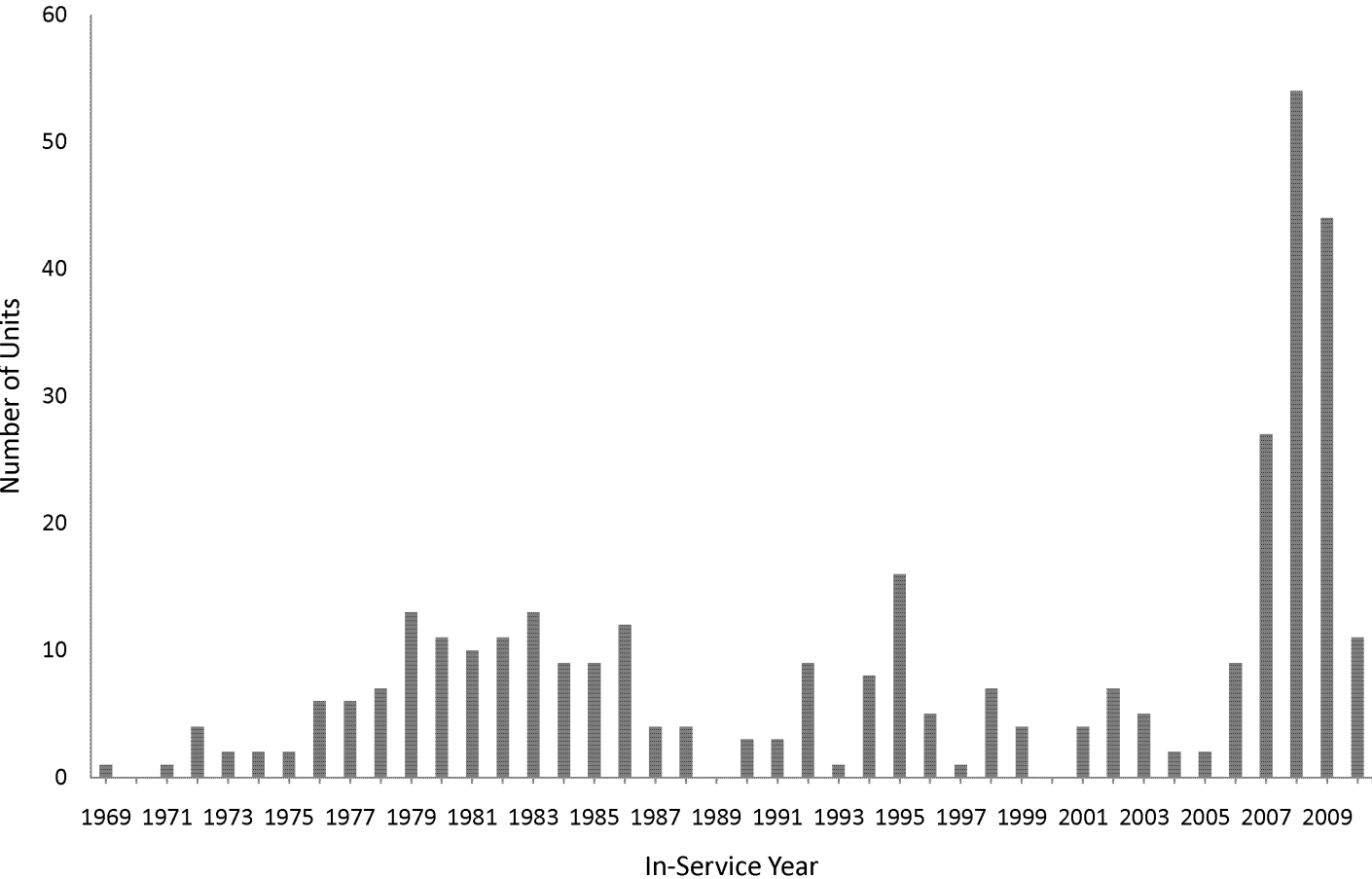
<sup>m</sup> Authors' correction based on personal knowledge

<sup>n</sup> Facility's Utility's website

<sup>o</sup> EPA's Steam Electric Power Generating Point Source Category: 2007/2008 Detailed Study Report (Online)

<sup>p</sup> Multiple FGD units are associated with one generator. The value reported is the nameplate capacity for the generator.

Figure 1: In-Service Year of FGD Units<sup>1</sup>



<sup>1</sup> The year reported is the year in which the FGD system originally came in-service. Unless the authors deemed that modifications were so extensive that the FGD was essentially a new unit.

Figure 2: Wet FGD Process Type

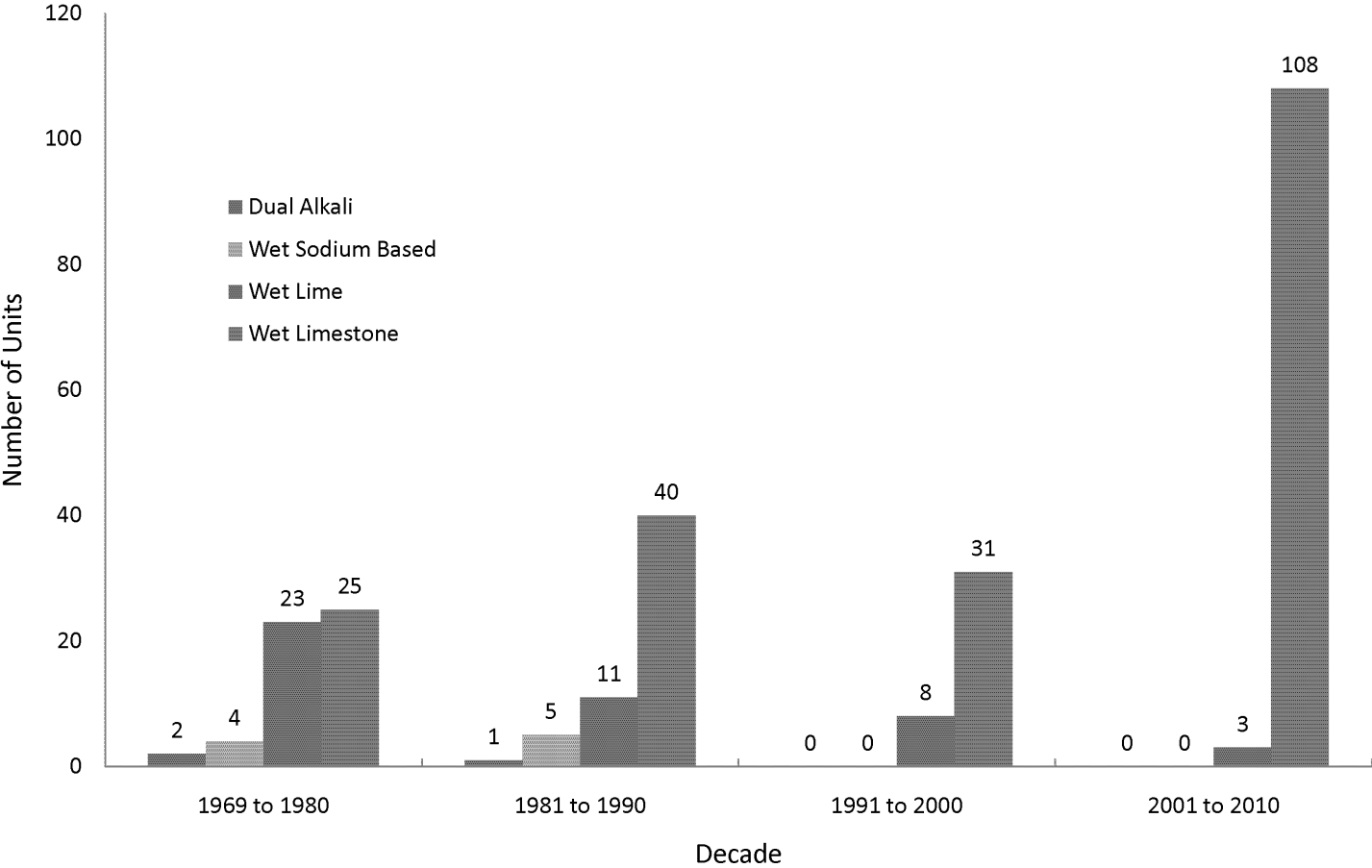


Figure 3: Design SO<sub>2</sub> Removal Efficiency for Wet FGD Units

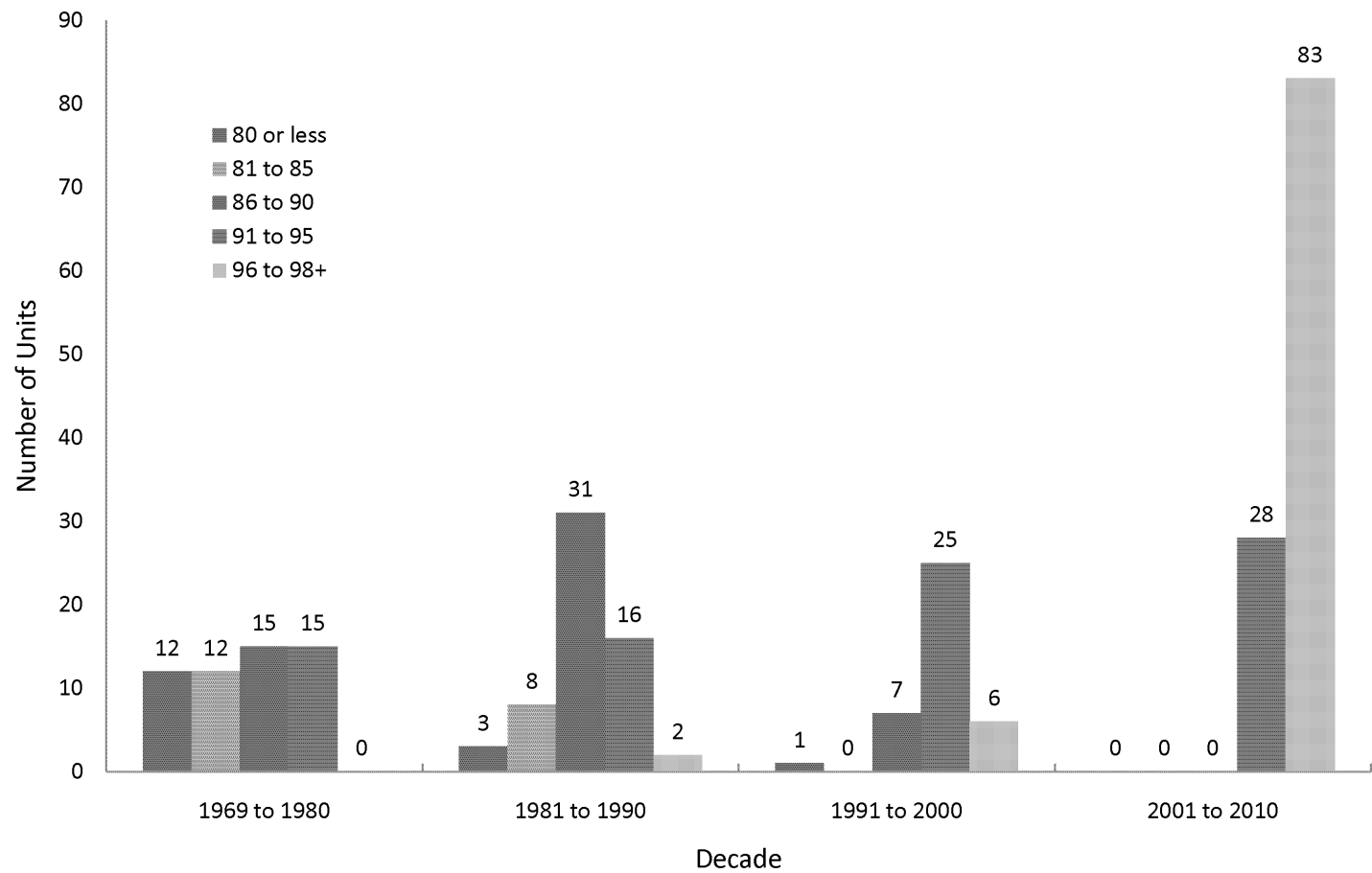


Figure 4: Design SO<sub>2</sub> Removal Efficiency for Semi-Dry FGD Units

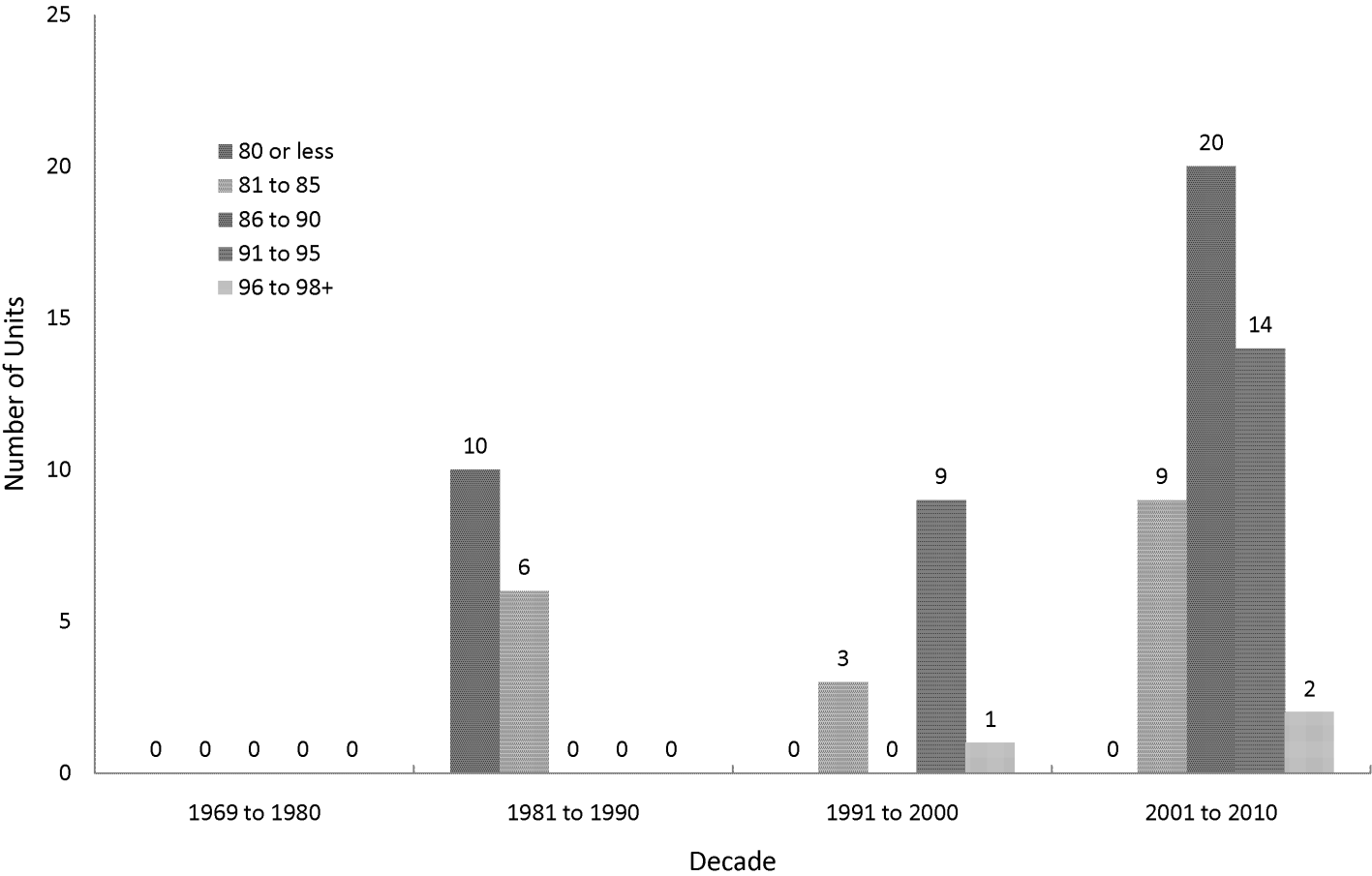
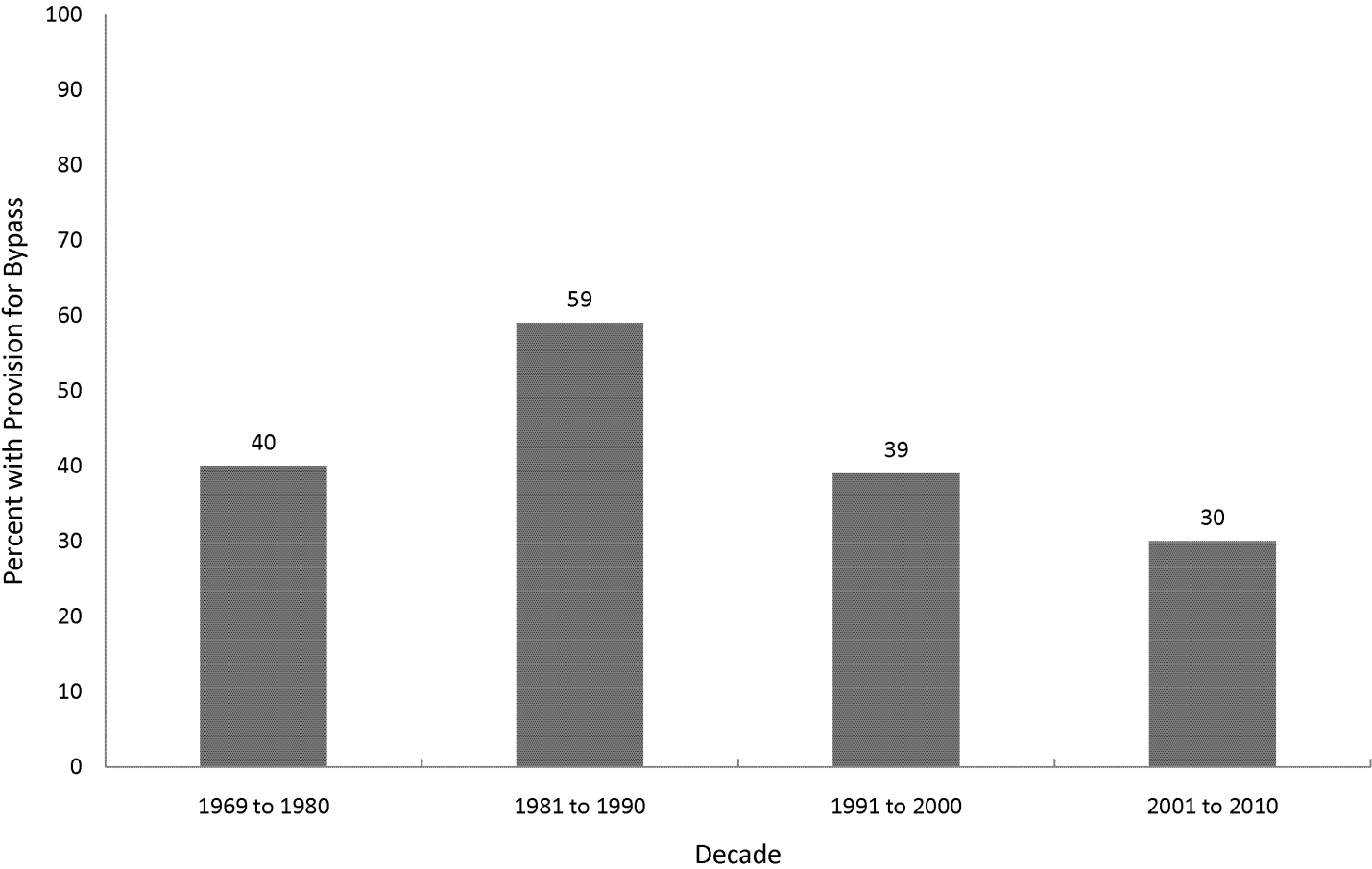


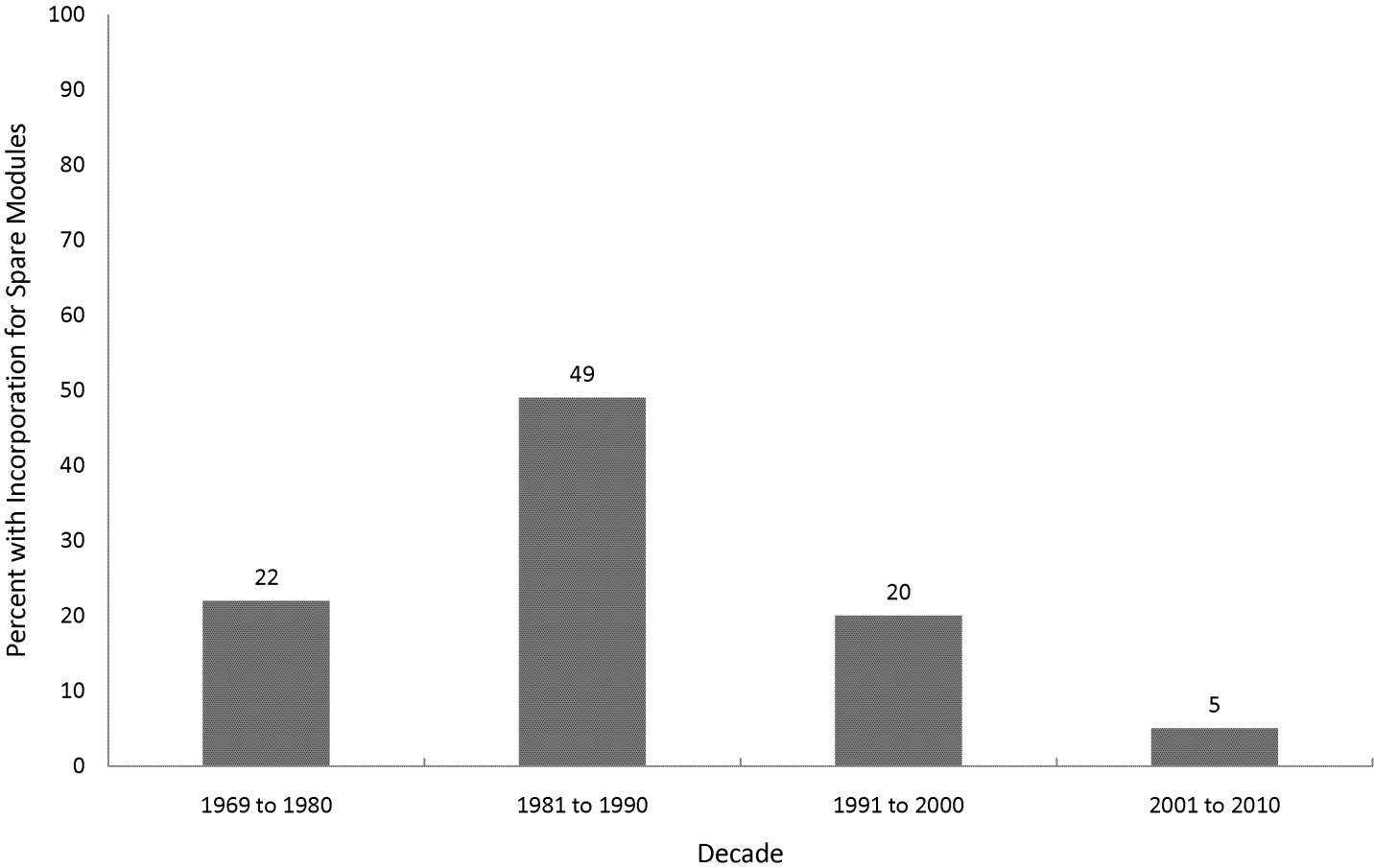


Figure 5: Provision for FGD Bypass as a Percent of the Decade<sup>2</sup>



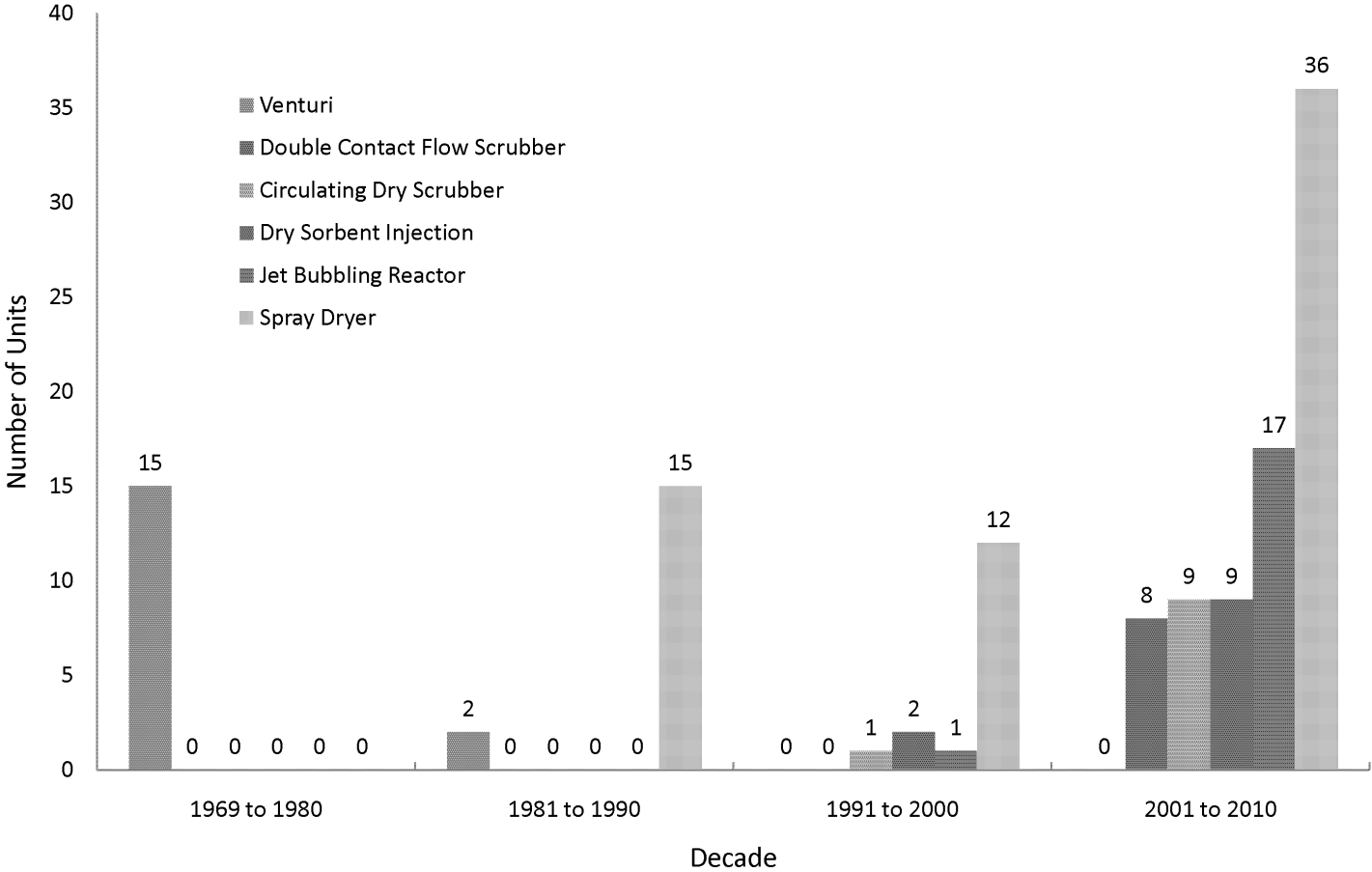
<sup>2</sup> The percent reported is taken from the total number of units in a decade with bypass information.

Figure 6: Incorporation of Spare Absorber Modules as a Percent of the Decade<sup>3</sup>



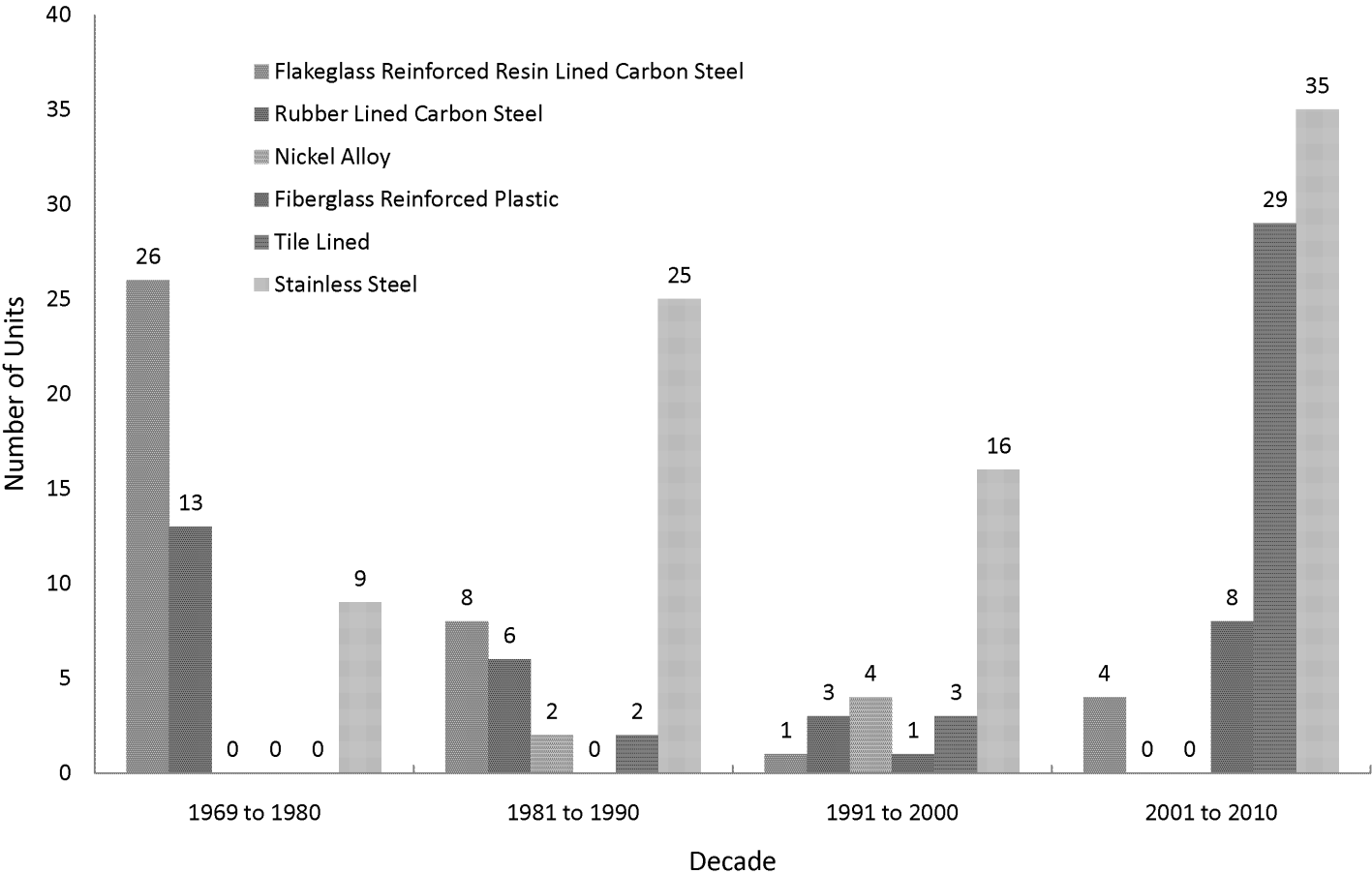
<sup>3</sup> The percent reported is taken from the total number of units in a decade with spare absorber modules.

Figure 7: Absorber Type Used for the FGD System<sup>4</sup>



<sup>4</sup> This figure does not account for the undeniable workhorse of the absorber type, spray towers. This figure more so acts to depict the rise and fall of absorber types over the decades. Furthermore, tray and packed types are not reported since every tray and packed is also a spray.

Figure 8: Absorber Material of Construction for the Wet FGD System<sup>5</sup>



<sup>4</sup> This figure of the material of construction for the absorber system does not represent all the wet FGD units online. As stated in the introduction due to lack of publically available information for current units, if the vendors did not provide this information it was not reported.

---

**From:** Belk, Ellen  
**To:** Kordzi, Joe; Phyllis Fox; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 7/8/2014 8:56:20 AM  
**Subject:** Task 3

Rescheduling as requested.

---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**Sent:** 7/8/2014 8:25:18 AM  
**Subject:** RE: call time?

Yes 11:30 am Pacific Time is scheduled. However I am happy to change it if that is better for you. I think you mentioned having it earlier?

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Monday, July 07, 2014 5:16 PM  
**To:** Belk, Ellen  
**Subject:** call time?

Just to confirm, the call tomorrow is at 11:30 AM PACIFIC? It shows up as 8:30 AM Pacific on my Google calendar.

---

**From:** Belk, Ellen  
**To:** Kordzi, Joe; Phyllis Fox; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 7/7/2014 4:38:26 PM  
**Subject:** Task 3

Dear Dr. Fox,  
Please let us know if you are available at all this week for a brief call, or when works best for you.  
We are happy to have you on board.  
Kind regards,  
Ellen

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Ex. 6 - Personal Privacy  
**Sent:** 7/7/2014 10:49:31 AM  
**Subject:** RE: Dr. Fox's contract is in place

Katherine,  
This is great news!

Dr. Fox,  
Whether you are in Germany, Spain, the U.S., or another country, we are happy to be able to work with you again! I will let the team know we are able to proceed on Task 3.

Thank you both!  
Ellen

Ellen Belk  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, July 07, 2014 9:46 AM  
**To:** Belk, Ellen  
**Cc:** Ex. 6 - Personal Privacy  
**Subject:** Dr. Fox's contract is in place

Ellen,  
I am happy to say, we are finally ready to go on Task 3.

Thanks to both of you for your patience!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



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**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Ex. 6 - Personal Privacy  
**BCC:** Donaldson, Guy; Kordzi, Joe  
**Sent:** 7/2/2014 12:10:54 PM  
**Subject:** RE: expect consulting agreement to go out today

Kathy,  
Thank you for the good news. We look forward to working with Dr. Fox as soon as we receive the go ahead. I appreciate your work to keep this moving as quickly as possible.  
Ellen

*Ellen Belk*  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, July 02, 2014 10:21 AM  
**To:** Belk, Ellen; Ex. 6 - Personal Privacy  
**Subject:** expect consulting agreement to go out today

Good morning,  
I have been working with our consultant office, and I believe they will be able to get the consulting agreement out to Dr. Fox today. Finally. As soon as it is signed, Dr. Fox can start work. Again, I apologize for the delays.

Please let me know if you have any questions or concerns.

Best,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**BCC:** Donaldson, Guy; Joe Kordzi  
**Sent:** 7/1/2014 1:53:28 PM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Thanks for the update. Hopefully your consultant is able to move quickly on this.  
Thanks again,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Tuesday, July 01, 2014 12:31 PM  
**To:** Belk, Ellen  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
The consulting agreement has been approved by our contracts office and moved from our contracts office to the consultant office. I will keep track of progress there. I do not expect it to take very long to get out to Dr. Fox. Hopefully, she will receive it by tomorrow.

I'll let you know when it is sent.

Best,  
Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, June 30, 2014 5:27 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Has there been any progress?  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 11:52 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Our contracts officer states that she will finish drafting it today or tomorrow (she's working the weekend to catch up), and it then goes to the consultants office, and then out to Dr. Fox. I will check with the consultants office and see if they have a backlog, and urge them to get it out to Dr. Fox as quickly as possible. As soon as Dr. Fox signs it, she can begin work.

Again, I apologize for the delay.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 12:04 PM  
**To:** Heller, Katherine B.

**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Thank you for checking.  
When the consulting agreement goes out, will that be the last step?  
Thanks!  
Ellen

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Friday, June 27, 2014 10:57 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Friday, June 27, 2014 11:55 AM  
**To:** Heller, Katherine B.  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Do we have a green light to move forward on Task 3 for the cost analysis?  
I was out of the office earlier this week and am working through my messages.  
Thank you,  
Ellen

*Ellen Belk*  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/30/2014 5:27:00 PM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Has there been any progress?  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 11:52 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Our contracts officer states that she will finish drafting it today or tomorrow (she's working the weekend to catch up), and it then goes to the consultants office, and then out to Dr. Fox. I will check with the consultants office and see if they have a backlog, and urge them to get it out to Dr. Fox as quickly as possible. As soon as Dr. Fox signs it, she can begin work.

Again, I apologize for the delay.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 12:04 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Thank you for checking.  
When the consulting agreement goes out, will that be the last step?  
Thanks!  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 10:57 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 11:55 AM  
**To:** Heller, Katherine B.  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Do we have a green light to move forward on Task 3 for the cost analysis?

I was out of the office earlier this week and am working through my messages.  
Thank you,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Jolynn Collins  
**BCC:** Donaldson, Guy; Kordzi, Joe  
**Sent:** 6/27/2014 1:43:19 PM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Kathy,  
Thank you for the update.  
I appreciate your efforts to encourage your colleagues to move forward as quickly as possible.  
Please let me know if there are any questions or if there is anything I can do to assist.  
We look forward to beginning work as soon as the necessary arrangements are made.  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 11:52 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Our contracts officer states that she will finish drafting it today or tomorrow (she's working the weekend to catch up), and it then goes to the consultants office, and then out to Dr. Fox. I will check with the consultants office and see if they have a backlog, and urge them to get it out to Dr. Fox as quickly as possible. As soon as Dr. Fox signs it, she can begin work.

Again, I apologize for the delay.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 12:04 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Thank you for checking.  
When the consulting agreement goes out, will that be the last step?  
Thanks!  
Ellen

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 10:57 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to

get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Friday, June 27, 2014 11:55 AM  
**To:** Heller, Katherine B.  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Do we have a green light to move forward on Task 3 for the cost analysis?  
I was out of the office earlier this week and am working through my messages.  
Thank you,  
Ellen

*Ellen Belk*  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**BCC:** Donaldson, Guy; Kordzi, Joe  
**Sent:** 6/27/2014 12:03:50 PM  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Thank you for checking.  
When the consulting agreement goes out, will that be the last step?  
Thanks!  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 27, 2014 10:57 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Assignment Task 3 - may we proceed?

Hi, Ellen-  
Just got your message on my phone. When I checked yesterday, our contracts person thought she might be able to get the consulting agreement out today. I apologize for the delay. I will check with her and let you know the status.

Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 27, 2014 11:55 AM  
**To:** Heller, Katherine B.  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Do we have a green light to move forward on Task 3 for the cost analysis?  
I was out of the office earlier this week and am working through my messages.  
Thank you,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**BCC:** Guy Donaldson  
**Sent:** 6/27/2014 11:55:02 AM  
**Subject:** Work Assignment Task 3 - may we proceed?

Hi Kathy,  
Do we have a green light to move forward on Task 3 for the cost analysis?  
I was out of the office earlier this week and am working through my messages.  
Thank you,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Kordzi, Joe  
**BCC:** Guy Donaldson  
**Sent:** 6/20/2014 4:01:29 PM  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Kathy,  
For any email messages next week regarding the contract with Dr. Fox, please cc Joe Kordzi as well (Kordzi.joe@epa.gov).  
Thank you,  
Ellen

*Ellen Belk*  
U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 20, 2014 2:22 PM  
**To:** Belk, Ellen  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Ellen,  
See below-Environ is working diligently. Our consultant office contact is out of the office today. I will check with her first thing Monday on Dr. Fox's contract.

Hope you have a good weekend!

Best,  
Kathy

---

**From:** Uarporn Nopmongcol [mailto:unopmongcol@environcorp.com]  
**Sent:** Friday, June 20, 2014 1:45 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Hi Kathy,

Yep, we got back on it right away and are going full speed on this. At the current rate, we don't expect much delay if at all.  
Thanks,  
Ou

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 20, 2014 10:23 AM  
**To:** Uarporn Nopmongcol  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Hi, Ou-  
Ellen sent notice below that the extension has been granted. However, she stressed that they need your results to make a determination how to proceed, so please keep working as fast as you can. I hope you've been able to get back to work since we received work plan approval. Please let me know if that is not the case, and also if there is anything you need from me to facilitate matters.

And have a good weekend!

Thanks,

Kathy

---

**From:** Heller, Katherine B.

**Sent:** Thursday, June 19, 2014 11:57 AM

**To:** 'Belk, Ellen'

**Cc:** Collins, JoLynn

**Subject:** RE: Regional Haze - motion extending deadlines granted

Ellen,

Thank you for letting us know. A relief, obviously. Now that we have WPA, we'll just move forward with the work as expeditiously as possible.

Thanks-Kathy

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]

**Sent:** Thursday, June 19, 2014 11:56 AM

**To:** Heller, Katherine B.

**Cc:** Collins, JoLynn

**Subject:** FW: Regional Haze - motion extending deadlines granted

Katherine,

The court has granted new dates for our proposed rulemaking and final rulemaking as follows:

**Proposed rulemaking by November 26, 1014**

**Final rulemaking by September 4, 2015.**

*Ellen Belk*

U.S. EPA R6, Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**U.S. District Court**

**District of Columbia**

### **Notice of Electronic Filing**

The following transaction was entered on 6/10/2014 at 5:02 PM and filed on 6/10/2014

**Case Name:** NATIONAL PARKS CONSERVATION ASSOCIATION et al v. UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY et al

**Case Number:** 1:11-cv-01548-ABJ

**Filer:**

**Document**  
**Number:** No document attached

**Docket Text:**

**MINUTE ORDER granting [82] Unopposed Motion to Amend Partial Consent Decree. The deadlines applicable to Texas and Oklahoma in Paragraphs 3 and 4 and Table A of the Consent Decree are modified to provide that EPA must sign the required notices of proposed rulemaking by November 26, 2014, and must sign the required notices of final rulemaking by September 4, 2015. The parties shall confer by telephone regarding the progress in the required rulemakings during the week of June 16, 2014, and at 60-day intervals thereafter until the required notices of final rulemaking applicable to Texas and Oklahoma have been signed. The calls will be scheduled for a mutually convenient time by counsel for EPA. Signed by Judge Amy Berman Jackson on 6/10/2014. (lcabj3)**

---

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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/20/2014 3:25:35 PM  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Thank you Kathy.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 20, 2014 2:22 PM  
**To:** Belk, Ellen  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Ellen,  
See below-Environ is working diligently. Our consultant office contact is out of the office today. I will check with her first thing Monday on Dr. Fox's contract.

Hope you have a good weekend!

Best,  
Kathy

---

**From:** Uarporn Nopmongcol [mailto:unopmongcol@environcorp.com]  
**Sent:** Friday, June 20, 2014 1:45 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Hi Kathy,

Yep, we got back on it right away and are going full speed on this. At the current rate, we don't expect much delay if at all.

Thanks,  
Ou

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 20, 2014 10:23 AM  
**To:** Uarporn Nopmongcol  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Hi, Ou-  
Ellen sent notice below that the extension has been granted. However, she stressed that they need your results to make a determination how to proceed, so please keep working as fast as you can. I hope you've been able to get back to work since we received work plan approval. Please let me know if that is not the case, and also if there is anything you need from me to facilitate matters.

And have a good weekend!  
Thanks,  
Kathy

---

**From:** Heller, Katherine B.  
**Sent:** Thursday, June 19, 2014 11:57 AM  
**To:** 'Belk, Ellen'  
**Cc:** Collins, JoLynn  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Ellen,

Thank you for letting us know. A relief, obviously. Now that we have WPA, we'll just move forward with the work as expeditiously as possible.

Thanks-Kathy

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]

**Sent:** Thursday, June 19, 2014 11:56 AM

**To:** Heller, Katherine B.

**Cc:** Collins, JoLynn

**Subject:** FW: Regional Haze - motion extending deadlines granted

Katherine,

The court has granted new dates for our proposed rulemaking and final rulemaking as follows:

**Proposed rulemaking by November 26, 2014**

**Final rulemaking by September 4, 2015.**

*Ellen Belk*

U.S. EPA R6, Air Program, Planning

214-665-2164

[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**U.S. District Court**

**District of Columbia**

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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/19/2014 12:33:52 PM  
**Subject:** RE: Work Plan has been approved

Thanks!

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Thursday, June 19, 2014 11:03 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Plan has been approved

Yes, I will alert you as soon as it is in place. Thanks!

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Thursday, June 19, 2014 12:03 PM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Plan has been approved

If you would, please let us know when as soon as we can proceed.  
Thanks,  
Ellen

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Thursday, June 19, 2014 10:54 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Plan has been approved

Yes ma'am, we've initiated the consulting agreement, and I expect it to be in place by Monday at the latest.

---

**From:** Belk, Ellen [<mailto:Belk.Ellen@epa.gov>]  
**Sent:** Thursday, June 19, 2014 10:47 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Plan has been approved

Are we able to proceed with Task 3 with Dr. Fox as well?

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Wednesday, June 18, 2014 9:19 AM  
**To:** Belk, Ellen  
**Cc:** Uarporn Nopmongcol ([unopmongcol@environcorp.com](mailto:unopmongcol@environcorp.com))  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**BCC:** Donaldson, Guy  
**Sent:** 6/19/2014 12:02:41 PM  
**Subject:** RE: Work Plan has been approved

If you would, please let us know when as soon as we can proceed.

Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, June 19, 2014 10:54 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Plan has been approved

Yes ma'am, we've initiated the consulting agreement, and I expect it to be in place by Monday at the latest.

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**Sent:** Thursday, June 19, 2014 10:47 AM  
**To:** Heller, Katherine B.  
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**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 18, 2014 9:19 AM  
**To:** Belk, Ellen  
**Cc:** Uarporn Nopmongcol (unopmongcol@environcorp.com)  
**Subject:** Work Plan has been approved

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**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/19/2014 12:01:29 PM  
**Subject:** RE: Regional Haze - motion extending deadlines granted

You are welcome.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, June 19, 2014 10:57 AM  
**To:** Belk, Ellen  
**Cc:** Collins, JoLynn  
**Subject:** RE: Regional Haze - motion extending deadlines granted

Ellen,  
Thank you for letting us know. A relief, obviously. Now that we have WPA, we'll just move forward with the work as expeditiously as possible.

Thanks-Kathy

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, June 19, 2014 11:56 AM  
**To:** Heller, Katherine B.  
**Cc:** Collins, JoLynn  
**Subject:** FW: Regional Haze - motion extending deadlines granted

**Katherine,**

**The court has granted new dates for our proposed rulemaking and final rulemaking as follows:**

**Proposed rulemaking by November 26, 2014**

**Final rulemaking by September 4, 2015.**

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**U.S. District Court**

**District of Columbia**

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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/19/2014 11:57:14 AM  
**Subject:** RE: Work Plan has been approved

Thank you.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, June 19, 2014 10:54 AM  
**To:** Belk, Ellen  
**Subject:** RE: Work Plan has been approved

Yes ma'am, we've initiated the consulting agreement, and I expect it to be in place by Monday at the latest.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, June 19, 2014 10:47 AM  
**To:** Heller, Katherine B.  
**Subject:** RE: Work Plan has been approved

Are we able to proceed with Task 3 with Dr. Fox as well?

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 18, 2014 9:19 AM  
**To:** Belk, Ellen  
**Cc:** Uarporn Nopmongcol (unopmongcol@environcorp.com)  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**CC:** Jolynn Collins  
**Sent:** 6/19/2014 11:55:40 AM  
**Subject:** FW: Regional Haze - motion extending deadlines granted

Katherine,

The court has granted new dates for our proposed rulemaking and final rulemaking as follows:

**Proposed rulemaking by November 26, 2014**

**Final rulemaking by September 4, 2015.**

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/19/2014 10:47:16 AM  
**Subject:** RE: Work Plan has been approved

Are we able to proceed with Task 3 with Dr. Fox as well?

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, June 18, 2014 9:19 AM  
**To:** Belk, Ellen  
**Cc:** Uarporn Nopmongcol (unopmongcol@environcorp.com)  
**Subject:** Work Plan has been approved

We are back in business on 0212979.003.009.002!

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 6/16/2014 8:19:44 AM  
**Subject:** RE: available to discuss scope of work on Task 3?

Hi Katherine,  
I am available for a discussion anytime today.  
Thank you,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, June 12, 2014 2:05 PM  
**To:** Belk, Ellen  
**Cc:** Ex. 6 - Personal Privacy Depro, Brooks M.  
**Subject:** available to discuss scope of work on Task 3?

Hi, Ellen-

Dr. Fox and I talked about her scope of work, and what exactly would be involved in the CBI portion of it. We would like to discuss that with you. She also has some concern about the open-ended nature of the task descriptions under subtask 3 (comment response) and subtask 4 (general control cost and performance capability support). I had asked her to estimate the level of effort to complete the tasks remaining under the SOW, but she is uncertain, not knowing the scope of the CBI effort and these two subtasks.

Would you be available to talk with me and Dr. Fox either tomorrow (any time but 12-1 EDT) or Monday? We need clarification before we can move forward.

Thank you,

**Katherine Heller**

Senior Economist

RTI International | Environmental, Technology, and Energy Economics

P.O.Box 12194 | Research Triangle Park, NC 27709 USA

919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Jolynn Collins; Joe Kordzi; Schoellkopf, Lynde; Donaldson, Guy  
**BCC:** R6-ConfRm-PecanTree-06111@epa.gov  
**Sent:** 6/9/2014 2:16:57 PM  
**Subject:** Follow up

Conference Call: Ex. 6 - Personal Privacy  
Conference Code



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**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Collins, JoLynn; Kordzi, Joe; Schoellkopf, Lynde  
**Sent:** 6/6/2014 6:29:41 PM  
**Subject:** RE: Follow up

Hi Katherine,  
JoLynn is not available on Mon. Does Tues am work for you?  
Thank you,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, June 06, 2014 5:13 PM  
**To:** Belk, Ellen; Collins, JoLynn; Kordzi, Joe; Schoellkopf, Lynde  
**Subject:** RE: Follow up

Hi, Ellen-  
I apologize for not responding in a timely manner-  
I was out of the office this afternoon after 4 pm EDT for an appointment. Unfortunately, I have a project meeting off-campus Monday morning, but I will be available to talk after 1 pm EDT (or before 9:15 EDT, if that works).

I hope you have a good weekend!

Best,  
Kathy

-----Original Appointment-----

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, June 06, 2014 4:50 PM  
**To:** Heller, Katherine B.; Collins, JoLynn; Kordzi, Joe; Schoellkopf, Lynde  
**Subject:** Follow up  
**When:** Friday, June 06, 2014 4:00 PM-4:15 PM (UTC-06:00) Central Time (US & Canada).  
**Where:** Conference Call

Conference Call: Ex. 6 - Personal Privacy  
Conference Code:

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**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Jolynn Collins; Joe Kordzi; Schoellkopf, Lynde  
**Sent:** 6/6/2014 4:49:35 PM  
**Subject:** Follow up

Conference Call: Ex. 6 - Personal Privacy  
Conference Code

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**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**CC:** Collins, JoLynn; Phyllis Fox; Joe Kordzi  
**BCC:** Guy Donaldson  
**Sent:** 6/4/2014 9:36:53 AM  
**Subject:** working with Dr. Fox

Hi Katherine,

I appreciate your keeping us informed of your progress.

Yes, we will of course continue to include you in any communication with Dr. Fox, including telephone calls and email messages.

Please let us know when a consulting agreement is in place so that work can continue on the Task 3 analyses.

Thank you very much.

Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
[belk.ellen@epa.gov](mailto:belk.ellen@epa.gov)

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Monday, June 02, 2014 11:51 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.; Kordzi, Joe; Ex. 6 - Personal Privacy  
**Subject:** working with Dr. Fox

Hi, Ellen,

I wanted to let you know that we are working on the paperwork to get a consulting agreement in place with Dr. Fox, so that she can work on non-CBI-related Task 3 analyses. I have sent her a limitation of future contracting clause document that we need to have signed. I also sent her a template she can use to describe what she has been doing for you over the past two months, and how many hours she has spent on it thus far. I requested that, aside from those two tasks, she do no more technical work until we have a consulting agreement in place and we authorize her to resume work.

I would ask all of you, please, to include me in any communication (telephone calls, emails, etc.), and for Dr. Fox to cc: me on any written deliverables. That is the correct protocol for EPA working through RTI with a consultant, and since RTI (and I as WA leader) are in the middle, it is critical that I know what is going on. I'm sure you understand.

Thanks very much-

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 5/29/2014 3:26:48 PM  
**Subject:** RE: resumes for suggested staff

Thank you Kathy. I look forward to our meeting tomorrow.  
Best regards,  
Ellen

*Ellen Belk*

U.S. EPA R6, Air Program, Planning  
214-665-2164  
belk.ellen@epa.gov

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, May 29, 2014 2:08 PM  
**To:** Belk, Ellen; Kordzi, Joe; Donaldson, Guy  
**Cc:** Depro, Brooks M.  
**Subject:** resumes for suggested staff

Ellen, Joe and Guy-

I am attaching RTI resumes for the three staff who may be involved in the task. We propose Ex. 4 - CBI task leader, supported by Ex. 4 - CBI and Ex. 4 - CBI. As you will see, Ex. 4 - CBI is a PE with a lot of relevant experience, at RTI and in earlier positions. We are confident Ex. 4 - CBI can provide excellent quality analytical support to Region 6. I will forward your meeting invitation to them.

Thanks very much, and we look forward to talking with you tomorrow.

Best regards,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe  
**CC:** Collins, JoLynn; Donaldson, Guy  
**Sent:** 5/29/2014 2:51:00 PM  
**Subject:** Contract Support for Texas Regional Haze Evaluation

Conference Line:

Conference Code:

Ex. 6 - Personal Privacy

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 5/29/2014 2:13:06 PM  
**Subject:** RE: Contract Work Assignment: Texas Regional Haze Evaluation

Kathy,  
That's fine.  
Thanks,  
Ellen

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, May 29, 2014 1:09 PM  
**To:** Belk, Ellen  
**Subject:** RE: Contract Work Assignment: Texas Regional Haze Evaluation

Ellen,  
I have invited Brooks Depro to sit in on the call, since he's our program manager on the contract. We look forward to talking with you at 2:30.

Best, Kathy

-----Original Appointment-----

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Thursday, May 29, 2014 12:28 PM  
**To:** Belk, Ellen; Collins, JoLynn; Heller, Katherine B.  
**Subject:** Contract Work Assignment: Texas Regional Haze Evaluation  
**When:** Thursday, May 29, 2014 1:30 PM-2:00 PM (UTC-06:00) Central Time (US & Canada).  
**Where:** R6-ConfRm-PecanTree-06I11@epa.gov

Conference Line: Ex. 6 - Personal Privacy  
Conference Code:

---

**From:** Belk, Ellen  
**To:** Collins, JoLynn; Katherine B. Heller (kbh@rti.org)  
**BCC:** R6-ConfRm-PecanTree-06111@epa.gov  
**Sent:** 5/29/2014 12:28:15 PM  
**Subject:** Contract Work Assignment: Texas Regional Haze Evaluation

Conference Line: Ex. 6 - Personal Privacy  
Conference Code

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org)  
**Sent:** 5/13/2014 2:34:27 PM  
**Subject:** Texas Regional Haze

Conference Line: Ex. 6 - Personal Privacy  
Participant Code:

An agenda will be provided in advance of the call.



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 5/9/2014 4:33:14 PM  
**Subject:** RE: consulting agreement

Thank you Katherine.

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, May 09, 2014 2:28 PM  
**To:** Belk, Ellen  
**Subject:** consulting agreement

Ellen,

At your request I checked with our consultant office folks, and they stated that Dr. Fox's contract had been modified on 5-8-2013 to extend the POP to 3-31-2014 and to reduce her LOE from [Ex. 4 - CBI] and NTE amount from [Ex. 4 - CBI] to [Ex. 4 - CBI]. I will send a copy of that modification to Dr. Fox and ask her to send a copy to you (even though she sent her original contract to you, I'm not comfortable sending a contractual document to a third party). But I wanted to let you know that it exists.

We will modify the contract again to extent the POP to 3-31-2015, so that she can proceed with whatever work does not require the CBI data. Also, I believe "your contracts" will be talking to "our contracts" next week, so we may know more soon.

Best,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**BCC:** Donaldson, Guy  
**Sent:** 4/2/2014 9:48:00 AM  
**Subject:** RE: follow-on WA

Hi Kathy,

Thank you for your message. I received word that the WA was approved in time to continue yesterday, April 1, uninterrupted. I hope that this the same message you received.

For Environ, we wish to proceed as recently discussed.  
Also, for Dr. Fox, we wish to proceed as recently discussed.

Please let me know if you have any further questions, or if I can be of assistance.

Ellen

*Ellen Belk*

U.S. EPA R6, 6PD-L, Air Program, Planning  
214-665-2164

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Wednesday, April 02, 2014 8:41 AM  
**To:** Belk, Ellen  
**Cc:** Depro, Brooks M.  
**Subject:** follow-on WA

Hi, Ellen-

I wanted to let you know that RTI has received the WA continuing your work. We are preparing a mod to Environ's subcontract for the new contract year. In doing so, shall I assume that you wish them to complete the analysis tasks that we talked about with them several weeks ago?

Thank you-

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

**From:** Belk, Ellen  
**To:** Joe Kordzi; Katherine B. Heller (kbh@rti.org)  
**Sent:** 3/25/2014 2:47:27 PM  
**Subject:** FW: Accepted: TX RH @ Mon Mar 31, 2014 12pm - 12:30pm **Ex. 6 - Personal Privacy**  
**Attachments:** invite.ics

Dr. Fox has accepted the meeting invitation for Monday.

-----Original Appointment-----

**From:** Google Calendar [mailto:calendar-notification@google.com] **On Behalf Of** Phyllis Fox  
**Sent:** Tuesday, March 25, 2014 1:44 PM  
**To:** Belk, Ellen  
**Subject:** Accepted: TX RH @ Mon Mar 31, 2014 12pm - 12:30pm **Ex. 6 - Personal Privacy**  
**When:** Monday, March 31, 2014 2:00 PM-2:30 PM (UTC-06:00) Central Time (US & Canada).  
**Where:** R6-ConfRm-PineTree-06O15 Call in Number **Ex. 6 - Personal Privacy** Code **Ex. 6 - Personal Privacy**

Phyllis Fox has accepted this invitation.

#### TX RH

Dr. Fox,  
 We would like to schedule a short meeting with you during the current period of performance. If you are available on Monday March 31, at 12 noon your time, that works for us.  
 Otherwise, please advise regarding your availability toward the end of this week.  
 Thank you very much,  
 Ellen

Mon Mar 31, 2014 12pm - 12:30pm Pacific Time

When

Where

R6-ConfRm-PineTree-06O15 Call in Number **Ex. 6 - Personal Privacy**  
**Ex. 6 - Personal Privacy** (map)  
 Calendar

**Ex. 6 - Personal Privacy**

Who

- Belk, Ellen - organizer
- 
- Phyllis Fox - creator
- 
- Kordzi, Joe
- 
- Katherine B. Heller (kbh@rti.org)
- 
- R6-ConfRm-PineTree-06O15

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account [belk.ellen@epa.gov](mailto:belk.ellen@epa.gov) because you are an attendee of this event.

To stop receiving future notifications for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar.

---

**From:** Belk, Ellen  
**To:** Phyllis Fox; Katherine B. Heller (kbh@rti.org); Kordzi, Joe  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 3/25/2014 11:02:46 AM  
**Subject:** TX RH

Dr. Fox,

We would like to schedule a short meeting with you during the current period of performance. If you are available on Monday March 31, at 12 noon your time, that works for us. Otherwise, please advise regarding your availability toward the end of this week.

Thank you very much,  
Ellen

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Depro, Brooks M.; Jolynn Collins; Phyllis Fox; Kordzi, Joe  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 3/19/2014 1:07:57 PM  
**Subject:** Canceled: CBI discussion -- follow up from 3/14

Conference Number: Ex. 6 - Personal Privacy  
Participant Code: Ex. 6 - Personal Privacy

---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**Sent:** 3/18/2014 4:04:41 PM  
**Subject:** RE: Are we on for the call? No one but me is on the line.

So sorry! I had rescheduled the call for tomorrow (Wed) at noon your time. Not everyone had been able to complete their follow-up items yet from the call Friday.

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Tuesday, March 18, 2014 2:10 PM  
**To:** Belk, Ellen; Kordzi, Joe  
**Subject:** Are we on for the call? No one but me is on the line.

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Depro, Brooks M.; Jolynn Collins; Phyllis Fox; Kordzi, Joe  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 3/18/2014 12:42:38 PM  
**Subject:** CBI discussion -- follow up from 3/14

Conference Number: [Ex. 6 - Personal Privacy]  
Participant Code: [Ex. 6 - Personal Privacy]

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Depro, Brooks M.; Jolynn Collins; Phyllis Fox; Kordzi, Joe  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 3/14/2014 4:22:28 PM  
**Subject:** CBI discussion -- follow up from 3/14

Conference Number: [Ex. 6 - Personal Privacy]

Participant Code: [Ex. 6 - Personal Privacy]



---

**From:** Belk, Ellen  
**To:** Phyllis Fox  
**Sent:** 3/14/2014 4:11:46 PM  
**Subject:** RE:

Okay sure. I wasn't sure which coast you were on these days J I was trying to set up a call on Tuesday. How about noon on Tuesday?

**From:** Phyllis Fox [mailto:[Ex. 6 - Personal Privacy](#)]  
**Sent:** Friday, March 14, 2014 3:10 PM  
**To:** Belk, Ellen  
**Subject:**

I cant make 10 AM Pacific on Monday for the followup call. Can it be a bit later?

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Depro, Brooks M.; Jolynn Collins; Phyllis Fox; Kordzi, Joe  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 3/14/2014 3:26:21 PM  
**Subject:** CBI discussion -- follow up from 3/14

Conference Number: [Ex. 6 - Personal Privacy]  
Participant Code: [Ex. 6 - Personal Privacy]

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**From:** Belk, Ellen  
**To:** Phyllis Fox  
**Sent:** 3/14/2014 2:13:10 PM  
**Subject:** RE: what's the call in info?

**Ex. 6 - Personal Privacy**

**From:** Phyllis Fox [mailto:phyllis.fox@epa.gov] **Ex. 6 - Personal Privacy**  
**Sent:** Friday, March 14, 2014 1:10 PM  
**To:** Belk, Ellen  
**Subject:** what's the call in info?

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Phyllis Fox; Collins, JoLynn  
**CC:** Kordzi, Joe; Schoellkopf, Lynde; Depro, Brooks M.  
**Sent:** 3/13/2014 1:13:18 PM  
**Subject:** CBI update

Topics:

1. CAA CBI Requirements (EPA)
2. Past experience with accessing CBI from other agencies (Dr. Fox)
3. Possible options for accessing CBI under Texas RH WA (EPA/RTI)

---

**From:** Belk, Ellen  
**To:** Collins, JoLynn; [Ex. 6 - Personal Privacy]  
**CC:** Brooks Depro (bmd@rti.org); Heller, Katherine B.  
**Sent:** 3/13/2014 1:10:17 PM  
**Subject:** RE: Agenda for Tomorrow's Meeting

Hi JoLynn,  
Thanks very much for the message.  
My computer is up and running again with a new version of Outlook.  
Ellen

**From:** Collins, JoLynn  
**Sent:** Thursday, March 13, 2014 10:59 AM  
**To:** [Ex. 6 - Personal Privacy]  
**Cc:** Brooks Depro (bmd@rti.org); Heller, Katherine B.; Belk, Ellen  
**Subject:** Agenda for Tomorrow's Meeting

Hi Dr. Fox,

I am sending you this email message on behalf of Ellen Belk because she is currently having problems with her email. I am the Project Officer on the RTI contract that is being used for the Texas RH work.

We wanted to give you an idea of the topics for discussion in tomorrow's meeting. Here they are:

1. CAA CBI Requirements (EPA)
2. Past experience with accessing CBI from other agencies (Dr. Fox)
3. Possible options for accessing CBI under Texas RH WA (EPA/RTI)

You can call Ellen if you have any questions, as she is not sure when her access to email will be restored. Her cell number [Ex. 6 - Personal Privacy]

*JoLynn Collins*  
Project Officer/GAO Audit & FMFIA Coordinator  
Office of Air Quality Planning and Standards  
Central Operations and Resources  
Room C451K; Mail Code C404-02  
T.W. Alexander Drive  
Research Triangle Park, NC 27711  
(919) 541-5671

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Phyllis Fox; Collins, JoLynn  
**CC:** Kordzi, Joe; Schoellkopf, Lynde  
**Sent:** 3/12/2014 1:47:39 PM  
**Subject:** CBI update

When: Friday, March 14, 2014 1:15 PM-1:30 PM (UTC-06:00) Central Time (US & Canada).

Where: Conference Call Ex. 6 - Personal Privacy Participant Code: Ex. 6 - Personal Privacy

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Phyllis Fox; Collins, JoLynn  
**CC:** Kordzi, Joe; Schoellkopf, Lynde  
**Sent:** 3/12/2014 1:47:27 PM  
**Subject:** CBI update

When: Friday, March 14, 2014 1:15 PM-1:45 PM (UTC-06:00) Central Time (US & Canada).

Where: Conference Call Ex. 6 - Personal Privacy Participant Code: Ex. 6 - Personal Privacy

Note: The GMT offset above does not reflect daylight saving time adjustments.

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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Collins, JoLynn  
**Sent:** 2/21/2014 4:07:23 PM  
**Subject:** RE: contract, EPA contact information

Katherine,  
Thank you for your message. We appreciated the discussion this morning.  
Please do not engage your CO, nor ours, on this issue at this time.  
I will investigate possible options and get back to you.  
Thank you,  
Ellen

*Ellen Belk*

Contracting Officer Representative  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, February 21, 2014 9:31 AM  
**To:** Belk, Ellen  
**Cc:** bmd@rti.org  
**Subject:** contract, EPA contact information

Ellen,  
Thank you for the call this morning. I hope we can find a way for Dr. Fox to access the CBI information. Here are the pertinent EPA folks for this contract:

Rodney-Daryl Jones, EPA Contracting Officer for this contract, RTP, 919-541-3112, [Jones.rodney-Daryl@Epa.gov](mailto:Jones.rodney-Daryl@Epa.gov)  
JoLynn Collins, EPA Project Officer for this contract, RTP, 919-541-567, [Collins.jolynn@Epa.gov](mailto:Collins.jolynn@Epa.gov)  
Roberto Morales, EPA Document Control Officer, RTP, 919-541-0880, [Morales.roberto@Epa.gov](mailto:Morales.roberto@Epa.gov)

I believe our contracting officer will be reaching out to the EPA CO and PO to set up a meeting. I will send you a copy of the contract on a separate email.

Best,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 2/21/2014 3:16:22 PM  
**Subject:** RE: contract, EPA contact information

Thank you very much.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Friday, February 21, 2014 9:31 AM  
**To:** Belk, Ellen  
**Cc:** bmd@rti.org  
**Subject:** contract, EPA contact information

Ellen,  
Thank you for the call this morning. I hope we can find a way for Dr. Fox to access the CBI information. Here are the pertinent EPA folks for this contract:

Rodney-Daryl Jones, EPA Contracting Officer for this contract, RTP, 919-541-3112, [Jones.rodney-Daryl@Epa.gov](mailto:Jones.rodney-Daryl@Epa.gov)  
JoLynn Collins, EPA Project Officer for this contract, RTP, 919-541-567, [Collins.jolynn@Epa.gov](mailto:Collins.jolynn@Epa.gov)  
Roberto Morales, EPA Document Control Officer, RTP, 919-541-0880, [Morales.roberto@Epa.gov](mailto:Morales.roberto@Epa.gov)

I believe our contracting officer will be reaching out to the EPA CO and PO to set up a meeting. I will send you a copy of the contract on a separate email.

Best,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Katherine B. Heller (kbh@rti.org); Kordzi, Joe  
**Sent:** 2/20/2014 4:05:43 PM  
**Subject:** CBI

When: Friday, February 21, 2014 9:00 AM-9:30 AM (UTC-06:00) Central Time (US & Canada).  
Where: Conference Call

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*

Call in number: Ex. 6 - Personal Privacy  
Participant code:

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**From:** Belk, Ellen  
**To:** Phyllis Fox  
**BCC:** Kordzi, Joe; Donaldson, Guy  
**Sent:** 2/20/2014 11:13:29 AM  
**Subject:** voicemail message received

Hi Phyllis,  
I received your voicemail message and plan to return your call tomorrow (Fri) afternoon.  
Ellen

Ex. 6 - Personal Privacy

**TX RH****R6-ConfRm-PineTree-06O15 Call in Number**

Ex. 6 - Personal Privacy

**Code**

Ex. 6 - Personal Privacy

**20140331T190000Z****CONFIRMED****PRODID**

-//Google Inc//Google Calendar 70.9054//EN

**Version**

2.0

**CALSCALE**

GREGORIAN

**METHOD**

REPLY

**Start Date/Time**

20140331T190000Z

**End Date/Time**

20140331T193000Z

**DTSTAMP**

20140325T184411Z

**ORGANIZER** ( CN="Belk, Ellen" )

mailto:belk.ellen@epa.gov

**UID**040000008200E00074C5B7101A82E00800000000B0828C5C1148CF010000000000000000  
0100000000EE52CBEDD7642D49982EE0DEA3C4DD77**Attendee**

mailto: Ex. 6 - Personal Privacy

Role REQ-PARTICIPANT

**CREATED**

20140325T150242Z

**Description**

Dr. Fox,

We would like to schedule a short meeting with you during the current period of performance. If you are available on Monday March 31, at 12 noon your time, that works for us. Otherwise, please advise regarding your availability toward the end of this week.

Thank you very much,  
Ellen

**Last Modified**

20140325T184411Z

**Location**

R6-ConfRm-PineTree-06O15 Call in Number

Ex. 6 - Personal Privacy

Code

Ex. 6 - Personal Privacy

**Sequence Number**

0

**Status**

CONFIRMED

**Summary**

TX RH

**Time Transparency**

OPAQUE

**X-MICROSOFT-CDO-APPT-SEQUENCE**

0

**X-MICROSOFT-CDO-OWNERAPPTID**

-1957087266

**X-MICROSOFT-CDO-BUSYSTATUS**

TENTATIVE

**X-MICROSOFT-CDO-INTENDEDSTATUS**

BUSY

**X-MICROSOFT-CDO-ALLDAYEVENT**

FALSE

**X-MICROSOFT-CDO-IMPORTANCE**

1

**X-MICROSOFT-CDO-INSTTYPE**

0

**X-MICROSOFT-DISALLOW-COUNTER**

FALSE

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 2/10/2014 3:17:20 PM  
**Subject:** RE: TX Haze: Cost estimate

Very good. Thanks.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Monday, February 10, 2014 2:17 PM  
**To:** Belk, Ellen  
**Subject:** RE: TX Haze: Cost estimate

Yes, that's correct.

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Monday, February 10, 2014 12:06 PM  
**To:** Heller, Katherine B.  
**Subject:** FW: TX Haze: Cost estimate

Kathy,  
In the message below, Ou refers to an unexpended budget of Ex. 4 - CBI. Could you please clarify which budget that is? Perhaps the RTI – Environ budget and not the EPA – RTI budget for this task?

Thank you.  
Ellen

*Ellen Belk*  
Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Tel: 214-665-2164

---

**From:** Uarporn Nopmongcol [mailto:unopmongcol@environcorp.com]  
**Sent:** Thursday, January 30, 2014 5:54 PM  
**To:** Belk, Ellen  
**Cc:** Heller, Katherine B. (kbh@rti.org); Greg Yarwood; Snyder, Erik; Feldman, Michael  
**Subject:** TX Haze: Cost estimate

Ellen,

Our estimate to complete two additional PSAT CAMx runs is Ex. 4 - CBI. Currently, our unexpended budget is about

Ex. 4 - CBI  
We are still checking on our project schedules and should be able to confirm our machine availability next week.

Thank you.  
Ou

---

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---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 2/10/2014 12:05:31 PM  
**Subject:** FW: TX Haze: Cost estimate

Kathy,  
In the message below, Ou refers to an unexpended budget of [Ex. 4 - CBI]. Could you please clarify which budget that is? Perhaps the RTI – Environ budget and not the EPA – RTI budget for this task?

Thank you.  
Ellen

*Ellen Belk*  
Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Tel: 214-665-2164

---

**From:** Uarporn Nopmongcol [mailto:unopmongcol@environcorp.com]  
**Sent:** Thursday, January 30, 2014 5:54 PM  
**To:** Belk, Ellen  
**Cc:** Heller, Katherine B. (kbh@rti.org); Greg Yarwood; Snyder, Erik; Feldman, Michael  
**Subject:** TX Haze: Cost estimate

Ellen,

Our estimate to complete two additional PSAT CAMx runs is [Ex. 4 - CBI]. Currently, our unexpended budget is about [Ex. 4 - CBI].  
We are still checking on our project schedules and should be able to confirm our machine availability next week.

Thank you.  
Ou

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This message contains information that may be confidential, privileged or otherwise protected by law from disclosure. It is intended for the exclusive use of the Addressee(s). Unless you are the addressee or authorized agent of the addressee, you may not review, copy, distribute or disclose to anyone the message or any information contained within. If you have received this message in error, please contact the sender by electronic reply to [email@environcorp.com](mailto:email@environcorp.com) and immediately delete all copies of the message.

---

**From:** Belk, Ellen  
**To:** Phyllis Fox; Heller, Katherine B.  
**Sent:** 2/5/2014 10:04:27 AM  
**Subject:** RE: update on CBI process

Kathy,  
I am working on indentifying an EPA CBI DCO contact in San Francisco for you, and will get back to you soon.  
Ellen

---

**From:** Phyllis Fox [mailto:Ex. 6 - Personal Privacy]  
**Sent:** Tuesday, February 04, 2014 1:22 PM  
**To:** Heller, Katherine B.  
**Cc:** Belk, Ellen  
**Subject:** Re: update on CBI process

Does this mean that I can only access the CBI at Region 9?

I would really prefer to work with it in my office.

On Tue, Feb 4, 2014 at 11:16 AM, Heller, Katherine B. <[kbh@rti.org](mailto:kbh@rti.org)> wrote:  
Hi,

I spoke with Carla Freeman, our CBI Document Control Officer (DCO). She will be contacting Dr. Fox to set up a time for CBI training and quiz to get her cleared for access to CBI under this EPA contract.

Phyllis, please expect a call from Carla Freeman of RTI's Industrial Security Office on Friday or Monday to discuss what time would work for you to do the training/quiz.

Ellen,  
Please provide us the name of the EPA CBI DCO at the San Francisco EPA office. Once Dr. Fox completes her training, Carla will contact that person to let them know that Dr. Fox is cleared for CBI access under this contract. You can then send the CBI documents to SF, and the EPA DCO there will work with Phyllis to provide any site-specific training and to give her access to the information.

Let me know if you have any questions.

Best,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
[919.541.5802](tel:919.541.5802) | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Phyllis Fox; Kordzi, Joe  
**CC:** Snyder, Erik; Feldman, Michael; Donaldson, Guy  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 1/31/2014 4:40:18 PM  
**Subject:** Texas Regional Haze Evaluation: Cost Analysis

When: Monday, February 03, 2014 3:00 PM-3:30 PM (UTC-06:00) Central Time (US & Canada).

Where: R6-ConfRm-PineTree-06O15

Note: The GMT offset above does not reflect daylight saving time adjustments.

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Conference Line:

Participant Code:

Ex. 6 - Personal Privacy

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 1/30/2014 2:16:21 PM  
**Subject:** RE: Dr. Fox

Thanks Kathy. I will set up a call with you and Dr. Fox for Mon.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, January 30, 2014 12:55 PM  
**To:** Belk, Ellen  
**Subject:** Dr. Fox

Hi, Ellen-

See below, Phyllis Fox is available for a call Monday afternoon. Note that she cites noon Pacific as the beginning of her availability.

I sent an email back to confirm that this means she has some time available, and she says she will need to do some juggling, and thus needs to have a firm schedule for her work.

Brooks Depro (our project manager for this contract) suggests you alert JoLynn Collins as quickly as possible that you will need to continue this work into the next contract year.

Thanks,  
Kathy

---

**From:** Phyllis Fox [mailto:Ex. 6 - Personal Privacy]  
**Sent:** Thursday, January 30, 2014 1:22 PM  
**To:** Heller, Katherine B.  
**Subject:** Re: EPA R6 inquiring about your availability

Any time Monday from noon Pacific through the end of the day would work for a call.

On Thu, Jan 30, 2014 at 9:56 AM, Heller, Katherine B. <kbh@rti.org> wrote:  
Hi, Dr. Fox-  
I hope you are doing well.

We just had a call with Ellen Belk and others at EPA to discuss the TX Regional Haze work. They asked me to check on your availability to do some work for them over the next couple of months, and assuming that you have some time available, want to set up a call to discuss the work sometime on Monday.

So, please let me know if you have time available during the next couple of months to do some work for EPA R6. And assuming you do have some time available, please let me know what time on Monday would work for a call with EPA.

Thanks very much,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)



---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 1/30/2014 12:05:06 PM  
**Subject:** RE: have not contacted Environ about this call

no, I have invited Greg and Ou and anyone else at Environ that they would like to include

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Thursday, January 30, 2014 11:03 AM  
**To:** Belk, Ellen  
**Subject:** have not contacted Environ about this call

My understanding was that you wanted to talk to RTI about plans going forward, but not necessarily talk to folks from Environ at this point. Is that correct?

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)

---

**From:** Belk, Ellen  
**To:** Heller, Katherine B.; Kordzi, Joe; Feldman, Michael; Snyder, Erik  
**CC:** Schoellkopf, Lynde; Donaldson, Guy  
**BCC:** R6-ConfRm-PineTree-06O15  
**Sent:** 1/29/2014 11:00:14 AM  
**Subject:** Evaluating Texas Regional Haze

When: Thursday, January 30, 2014 11:15 AM-11:45 AM (UTC-06:00) Central Time (US & Canada).

Where: R6-ConfRm-PineTree-06O15

Note: The GMT offset above does not reflect daylight saving time adjustments.

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Agenda:

Update regarding the path forward (EPA)

Discussion of schedules (all)

Conference Line:

Participant Code:

Ex. 6 - Personal Privacy

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/13/2013 11:36:39 AM  
**Subject:** RE: Dr. Fox's schedule related to Phase II

Thanks Katherine.

---

**From:** Heller, Katherine B. [mailto:kbh@rti.org]  
**Sent:** Saturday, December 07, 2013 5:12 AM  
**To:** Belk, Ellen  
**Subject:** RE: Dr. Fox's schedule related to Phase II

I'm so sorry about your tree. We're expecting that weather tonight, but it isn't as odd in NC as it is in Dallas. I'll call Dr Fox and let you know what her availability would be. Have a safe weekend!

---

**From:** Belk, Ellen [mailto:Belk.Ellen@epa.gov]  
**Sent:** Friday, December 06, 2013 7:20 PM  
**To:** Heller, Katherine B.  
**Subject:** Dr. Fox's schedule related to Phase II

Hi Katherine,

Thank you very much for contacting Environ and for your voicemail message with schedule information.

Sometime next week, could you please contact Dr. Fox also to learn whether she may have any availability for TX regional haze work this spring?

Many thanks,  
Ellen

(It is icy today in the Dallas area. One of my front trees fell over under the weight of the ice.)

*Ellen Belk*

Environmental Engineer  
U.S. Environmental Protection Agency, Region 6  
Multi-media Planning and Permitting Division  
Air Planning Section, 6PD-L  
1445 Ross Avenue  
Dallas Texas 75202  
Tel: 214-665-2164  
Fax: 214-665-7263

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**Sent:** 12/6/2013 7:20:03 PM  
**Subject:** Dr. Fox's schedule related to Phase II

Hi Katherine,

Thank you very much for contacting Environ and for your voicemail message with schedule information.

Sometime next week, could you please contact Dr. Fox also to learn whether she may have any availability for TX regional haze work this spring?

Many thanks,  
Ellen

(It is icy today in the Dallas area. One of my front trees fell over under the weight of the ice.)

*Ellen Belk*

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**From:** Belk, Ellen  
**To:** Snyder, Erik; Feldman, Michael; 'gyarwood@environcorp.com'; unopmongcol@environcorp.com; Schoellkopf, Lynde; Katherine B. Heller (kbh@rti.org)  
**CC:** Donaldson, Guy; Collins, JoLynn; Kordzi, Joe; Tanarit Sakulyanontvittaya  
**BCC:** R6-ConfRm-CypressTree-06O02@epa.gov  
**Sent:** 9/19/2013 10:53:51 AM  
**Subject:** Texas Regional Haze: meeting confirmation

When: Thursday, September 19, 2013 2:30 PM-3:00 PM (UTC-06:00) Central Time (US & Canada).  
Where: R6-ConfRm-CypressTree-06O02@epa.gov

Note: The GMT offset above does not reflect daylight saving time adjustments.

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Conference Number: Ex. 6 - Personal Privacy  
Conference Code:

Agenda:  
Report



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**From:** Schoellkopf, Lynde  
**To:** Belk, Ellen; Katherine B. Heller (kbh@rti.org); Hanks, Katie P.; Kordzi, Joe; Collins, JoLynn  
**Sent:** 5/12/2015 10:03:55 AM  
**Subject:** RE: TX RH RTI Comment Categorization

I think I might be dialing an incorrect Conf Code - [REDACTED]?

-----Original Appointment-----

**From:** Belk, Ellen  
**Sent:** Wednesday, May 06, 2015 2:12 PM  
**To:** Belk, Ellen; Katherine B. Heller (kbh@rti.org); Hanks, Katie P.; Kordzi, Joe; Collins, JoLynn; Schoellkopf, Lynde  
**Subject:** TX RH RTI Comment Categorization  
**When:** Tuesday, May 12, 2015 9:00 AM-9:30 AM (UTC-06:00) Central Time (US & Canada).  
**Where:** R6-ConfRm-PecanTree-06111@epa.gov

Is it possible to move this earlier by a half hour? If so, thanks everyone!

Call in number: [REDACTED] 3  
Code: [REDACTED]

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**From:** Belk, Ellen  
**To:** Heller, Katherine B.  
**CC:** Freeman, Carla S.; Depro, Brooks M.; LeDoux, Erica  
**Sent:** 7/14/2014 10:51:18 AM  
**Subject:** RE: Region 6 CBI Document Control Officer

Hi Katherine,  
Yes, the Document Control Officer is Erica LeDoux.  
Please see Erica's contact information below.  
Thank you,  
Ellen

*Ellen Belk*

Environmental Engineer  
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Erica G. LeDoux, Environmental Engineer  
U.S. EPA Region 6  
Air Permits Section (6PD-R)  
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Dallas, TX 75202  
Office: (214) 665-7265  
Fax: (214) 665-6762  
[ledoux.eric@epa.gov](mailto:ledoux.eric@epa.gov)

**From:** Heller, Katherine B. [<mailto:kbh@rti.org>]  
**Sent:** Thursday, July 10, 2014 11:06 AM  
**To:** Belk, Ellen  
**Cc:** Freeman, Carla S.; Depro, Brooks M.  
**Subject:** Region 6 CBI Document Control Officer

Hi, Ellen-  
We are preparing a request for WA-specific CBI clearance under WA 3-09. Although you, as WAM, will be the person to approve the request, the request will be sent to your CBI manager or document control officer. Could you provide contact information for that person?

Thanks,

**Katherine Heller**  
Senior Economist  
RTI International | Environmental, Technology, and Energy Economics  
P.O.Box 12194 | Research Triangle Park, NC 27709 USA  
919.541.5802 | <http://www.rti.org> | [kbh@rti.org](mailto:kbh@rti.org)